

<Review comments by experts on Second Order Draft of Chapter 5 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_5_0001	Lyde, Gund	5	0	856		Well written. It is refreshing to see the use of first person sentences and the occasional use of the present tense. These make the chapter more friendly and personal.		Noted	
E_5_0002	Brown, Lynette	5	1	1		In the previous Chapters 1&2 land use has been spelled "land-use". In this Chapter the authors use both hyphenated and not, format for consistency. Sometimes web sites in the text are underlined and other times they are not - format for consistency throughout Chapter. Text bounces between abbreviating carbon and not, please format for consistency.		Accept with modification	Land-use was adopted throughout the text
E_5_0003	Brown, Lynette	5	11	11		All previous Chapters have listed a Review Editor(s) - did this Chapter not have?		Accept with modification	Review list included
E_5_0004	Lyde, Gund	5	73	74		Consider repeating the difference between coastal and inland here to make it easier on the reader.		Reject	Decision Tree in Chapter 1 makes that difference and defining here might be more confusing
E_5_0005	Garcia-Diaz, Cristina	5	74	75		There are other constructed wetlands. Are they included within this chapter or elsewhere? the situation of these other constructed wetlands in relation to these guidelines should be mentioned in this chapter.		Accept with modification	Delete the text: "...that are created or modified for wastewater treatment..." to reduce confusion. Reader can simply refer to Ch6 Supp for what constructed wetlands are covered.
E_5_0006	Brown, Lynette	5	79	79		USDA 1999 is not listed in the References - are you referring to line 1039-1040? If so update citation to Soil Survey Staff or revise Reference author.		Accept	Changed to "Soil Survey Staff, 1999"
E_5_0007	Lyde, Gund	5	79	79		USDA, 1999 not in references - Perhaps it is 1039-1040		Accept	Changed to "Soil Survey Staff, 1999"
E_5_0008	Xianguo, Lu	5	83	83		Please add "ponding or saturation" after "flooding". Reference:"Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (U.S. Federal Register, July 13, 1994)."		Reject	"Wetland mineral soils" are defined in the 2006 guidelines as written in the current text. We will maintain that same definition here for IWMS.
E_5_0009	Brown, Lynette	5	84	84		Insert dash between "land use" for consistency (see line 98).		Accept	Changed land use to land-use throughout the text
E_5_0010	Xie, Yonghong	5	84	84		(Forest Land, Cropland, Grassland, Wetlands, Settlements and other land) should insert into "...of the six land use categories"		Accept	Text inserted at the end of the phrase
E_5_0011	Brown, Lynette	5	85	91		After reading this Chapter I am still unclear if managed IWMS created by agricultural irrigation are included? Please clarify.		Reject	We are unclear on what the reviewer means by "managed IWMS created by agricultural irrigation". The definition of Flooded Lands includes impoundments for irrigation, and in that case we do not cover this type of land (as stated in Ch1 Supp).
E_5_0012	Xie, Yonghong	5	85	91		should explicitly indicate which types of wetlands including in IWMS, such as marsh, floodplain, pond, shallow lakes.		Reject	We cover managed lands where a specific type of soil is found (IWMS), which may or may not be classified as "Wetland". Therefore, to avoid confusion we prefer to define by soil characteristics rather than ecosystem classification.
E_5_0013	Brown, Lynette	5	104	104		First use of phrase "emission factors" introduce abbreviation (EFs).		Accept	Efs inserted
E_5_0014	Brown, Lynette	5	105	105		Replace "have" with "has".		Accept	Replaced
E_5_0015	Sato, Atsushi	5	108	111		How "Flooded land" and "Inland Wetlands Mineral Soils" are defined or separated should be explained more clearly.		Accept with modification	2006 Guidelines refer to reservoirs only, flooded land and impoundments will be removed from the text
E_5_0016	Federici, Sandro	5	111	111	5.1	In table 5.1 remove information on wetland restoration and on EFCH4-IWMS from the section on "Land remaining under the same land-use". Any wetland restored/created wetland determine a land use change (to wetlands)		Reject	Re-wetting and creation may or may not constitute a land-use change according to a country's discretion.
E_5_0017	Sato, Atsushi	5	111	111		Table 5.1: Wetlands restoration may be happened in wetlands remaining wetlands, so wetland Land use category should be added in Table 5.1		Accept	We will add "Wetland" as an IPCC Land Use Category in Table 5.1.
E_5_0018	Ometto, Jean Pierre	5	115	117		Tropical Wet and Moist need to be defined at the Glossary		Accept	Referenced 2006 guidelines where those definitions are provided.
E_5_0019	Xie, Yonghong	5	120	121		delete "(Forest Land, Cropland, Grassland, Wetlands, Settlements and other land)"		Accept	Inserted before, in response to E_5_0010
E_5_0020	Ometto, Jean Pierre	5	122	122		In IPCC one of the categories is "Forested Land", but the supplement should mention that In the Decision 16/CMP.1 a land with forest cover is defined as "Forested Land"		Reject	We are keeping the six IPCC LU Categories. Should check with other chapters for consistency and the need to cite 16/CMP.1 in all chapters
E_5_0021	Ometto, Jean Pierre	5	125	136		Suggestion: replace dominant by predominant		Accept	Text replaced

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E_5_0022	Brown, Sandra	5	127	130		for the forest WMS most of these are in floodplains and riverine systems subject to periodic floodplain. In much of the US --where these have been converted to croplands (e.g. the Mississippi River basin) the so called drainage management was more a question of diverting water away using levees etc rather than ditching. So in essence the water managment shortens the hydroperiod rather than eliminating it so the cropland soils still get flooded in years of lots of rain and snow melt in spring. The statements you give in this lines is not quite true about soil C on WMS--in many cases shortening the hydroperiod in forests remaining forests can actually increase productivity and increase C sequestration in vegetation and soil. Conversely--flooding forested wetlands slows there growth a lotso not only do you get moer CH4 potentially but also decrease C uptake by plants as productivity goes down (Lugo, A. E. and S. Brown. 1984. The Oklawaha River forested wetlands and their response to chronic flooding. Pages 365-373 in K. C. Ewel and H. T. Odum (eds.), Cypress Swamps. University Presses of Florida, Gainesville.). I assume this process is captured somewhere?		Accept, with modification, text changed	We agree that there are possible cases where drainage can lead to overall ecosystem level gains in carbon but thi is rarely the case. We have changed the text to soften this assertion that this is a more general pricipal. Regarding the intential flooding of wetlands for reservoir or other purposes, that is not covered in this chapter.
E_5_0023	Brown, Lynette	5	128	128		Delete period at end of line, change to comma.		Accept	Text replaced
E_5_0024	Ometto, Jean Pierre	5	129	130		How vegetation productivity is affected by draining of IWMS? "Vegetation" needs to be defined for clarity		Accept with modification, text changed	We changed the text to reflect that drainage generally leads to greater vegetation productivity
E_5_0025	Ometto, Jean Pierre	5	131	132		How ditches through wetlands affect flood control, navigation and transportation ?		Accept with modification	We changed the text to indicate that canals are mainly for navigation and ditches through wetlands are for flood control and increasing productivity
E_5_0026	Blujdea, Viorel	5	132	132		List may include irrigation-drainage systems associated to islands embankments (e.g. on lower Danube and Danube delta) with temporary ground water level rising above soil		Accept with modification	This example is too specific for our broad generalizations here but we did the add that irrigation can affect IWMS hydrology
E_5_0027	Ometto, Jean Pierre	5	133	133		Isn't levee a natural processes? Clarify		Reject	That are natural and constructed levees
E_5_0028	Bergier, Ivan	5	135	138		The land-use changes caused by simultaneous agriculture fertilization and small dams, however, might have positive effects, responsible for buffering of additional sediments and nutrients to downstream wetlands, and the creation of novel and useful wetlands upstreams (Powers et al., 2013). REF: Powers et al, 2013, <a href="http://www.agu.org/pubs/crossref/pip/2012JG002148.shtml">http://www.agu.org/pubs/crossref/pip/2012JG002148.shtml</a>		Reject	This example is too specific for our broad generalizations here
E_5_0029	Ometto, Jean Pierre	5	136	136		There a need for clarification concerning the hydroelectric reservoir riparian wetlands - potentially created by the construction of the dam, and that is under the same hydroelectric operation (which affects the water level in the lake)		Accept	We added to text to clarify that these are newly created wetlands upstream and the natural wetlands downstream
E_5_0030	Ometto, Jean Pierre	5	138	138		Suggestion: exclude "and on vegetation communities", this is implicit when "nutrient load to wetlands" is mentioned (the reference could stay);		Accept	Text removed
E_5_0031	Ometto, Jean Pierre	5	139	139		replace: with IWMS by on IWMS (checkroughtout the text)		Accept	Text replacedroughtout the document
E_5_0032	Brown, Sandra	5	139			rice production in where? Not so much in tropics as build paddies and are very widespread in S/SE Asia e.g.--they divert water from rivers to flood paddies.		Reject	Rice is covered in 2006 Guidelines
E_5_0033	Ometto, Jean Pierre	5	141	141		replace: with IWMS by on IWMS (checkroughtout the text)		Accept	Text replacedroughtout the document
E_5_0034	Ometto, Jean Pierre	5	143	143		replace: with IWMS by on IWMS (checkroughtout the text)		Accept	Text replacedroughtout the document
E_5_0035	Brown, Sandra	5	143			grazing on such lands isrelatively widespread but the point is it is not well organized and in many tropical countries it just happens that water buffalos graze in them and of course can do a lot of damage		Noted	Agree but we didn't think any change to the text was needed
E_5_0036	Brown, Lynette	5	144	144		Wang et al., 2009 is not listed in the References - please add to References or delete from text.		Accept	Reference removed
E_5_0037	Lyde, Gund	5	144	144		Wang et al., 2009 not in references		Accept	Reference removed
E_5_0038	Lyde, Gund	5	144	144		forested wetland' Here and elsewhere, we need to be clear about what is being written. Are we referring to land classified as Land Use 'Wetlands' that has trees on it, or are we referring to land classified as Forest land that is wet. In case of the former, consider always capitalizing Wetland when refering to the land use class. In the case fo the latter, in this example, consider using Forested wet land (wetland being two words) or wet Forest land.		Accept with modification	To avoid confusion changed throughout the text Wetland with forest, instead of forested wetlands (emphasys on Wetlands instead of forest).
E_5_0039	Song, Changchun	5	144	144		Wang et al., 2009 was not found in the References of this chapter.		Accept	Reference removed

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E_5_0040	Brown, Sandra	5	147			I am surprised about statement about not a lot of information about impacts of forest management on C stock changes/GHG emissions on IWMS---in the US e.g. there is a lot of harvesting of trees that takes place in forested wetlands on mineral soils--species such as oaks, walnut, etc grow here. Usually the hydrology of these systems is not altered and i expect the impact on soil C is not different than on non-WMS . they log when not flooded		Rejected	We had TSU contact the author of the comment to ask for references and they didn't provide any. A subsequent review of the bottomland hardwood literature they suggested indicated a couple of papers that would be relevant to this chapter including one on carbon changes in vegetation after reforestation and one on soil respiration after harvest treatments. This is not enough data to develop emission factors for these systems.
E_5_0041	Garcia-Diaz, Cristina	5	149	150		It seems that this paragraph is excluding wetland restoration of IWMS that were naturally dried, for example, due to several years of drought. We think this IWMS that were naturally dried and then restored should be considered, therefore, we suggest the deletion of the words "artificially drained" in the line 150.		Accept with modification	We removed the word artificially as we acknowledge that they can dry down for other reasons
E_5_0042	Bergier, Ivan	5	151	153		In cropland areas of intense use of fertilizers the removal of a small dam might be a problem, because the dam acts as a water purifying agent, likewise a wetland. In the long term a small dam is indeed converted to a wetland due to sediment deposition. Large dams might be avoided but we need to be careful with respect to small dams in agricultural areas. For instance, in the Pantanal wetland, there is an extraordinary exportation of floating aquatic mats (Bergier et al., 2012; Buller 2012), which represents about 1% of the entire wetland NPP. Such exportation is not seen in the Amazon basin, then it is likely that agricultural land-use changes in headwater highlands, in particular in the north and east borders of the Upper Paraguay Basin (Galdino et al., 2003), has been fertilizing lowland floodplain with nonrenewable nutrients (NPK) and sediments (soil erosion) due to the lack of natural or artificial buffering systems (native riverbank forests or small dams) and adequate land/soil management. Actually this scenario on highlands has been changing to more soil conservation practices and reforestation of riverbanks and there is an intense discussion on the balance between positive and negative roles of small dams on the Pantanal wetland. REFS: Bergier et al (2012), <a href="http://www.sciencedirect.com/science/article/pii/S1642359312700083">http://www.sciencedirect.com/science/article/pii/S1642359312700083</a> ; Buller 2012, <a href="http://www.unicamp.br/fea/ortega/extensao/Dissertacao-SeleneBuller.pdf">http://www.unicamp.br/fea/ortega/extensao/Dissertacao-SeleneBuller.pdf</a> ; Galdino et al.(2003), <a href="http://www.cpap.embrapa.br/publicacoes/online/DOC52.pdf">http://www.cpap.embrapa.br/publicacoes/online/DOC52.pdf</a>		Accept with Modification	We understand small dams used for agriculture will not react the same way as dams on rivers. We didn't intend to be that specific here but we did add the modifier river before dam to be somewhat more specific
E_5_0043	Brown, Sandra	5	165	167		I believe that the Mitsch et al 2012 paper does more than suggest--it shows that wetlands can be net C sinks after accounting for CH4 based on 7 detailed studies around the world and many others...please change. This work was for temperate and tropical wetlands on MS		Accept	Change text from "have suggested" to "have shown" on line 168.
E_5_0044	Penman, Jim	5	170			Do the authors intend to say 'arid' in this sentence? Clearly a drained wetland soil could be part of an arid landscape, but to a non-specialist in the field it seems odd that this should have happened to the extent that seems suggested.		Noted	We consider the term arid appropriate. We are not discussing drained wetlands here, just saline wetlands in general which are found in arid landscapes.
E_5_0045	Hirota, Mitsuru	5	173	177		It's not true. There are many previous studies on soil C and GHGs dynamics in saline IWMS, especially in Eurpoe. The authors should reflected and/or refer these articles.		Reject	We requested publications from the author of the comment and all were coastal (most) or constructed wetlands (one), which are not covered in our chapter.
E_5_0046	Xianguo, Lu	5	174	175		This statement is too absolute. In fact, a few studies have been done in Songnen Plain of Northeast China. Please refer to: Junhong Bai, Hu Ouyang, Qinggai Wang, Caiping Zhou, Xiao-feng Xu. Spatial variations in daily average CO2 concentrations above wetland surface of Xianghai National Nature Reserve, China. Journal of Environmental Sciences, 2005, 17(1): 54-58. Puyi Huang, Hongxian Yu, Dongke Lv, Chengxue Ma, Wanfeng Zhang. CO2 flux across water-air interface in Zhalong wetlands in spring. Journal Journal of Northeast Forestry University, 2009, 37(9): 91-94.		Reject	The references provided by the reviewer were not on managed land and it was not possible to tell if the soils were mineral or organic.
E_5_0047	Wang, Xiaowen	5	196	200		According to this part, the CO2 emission and removals from land are estimated on the basis of changes in the carbon stocks. However, this method might not be appropriate for wetlands, because the water tables in wetlands (including cropland and restored wetlands mentioned in the following sections) are higher than other land-use categories, and the non-CO2 emission and leaching of dissolved organic carbon (DOC) by river or drainage from the soils should not be neglected. Thus, I suggested a statement could be added to this paragraph, that the estimation of the carbon stock change including the both CO2 and non-CO2 emission, and the DOC leaching.		Reject	We are using the accepted methods for C emission and removals for wetland mineral soils, which is the stock change method. There is not available literature to include losses of C as DOC for wetland mineral soils.
E_5_0048	Brown, Lynette	5	197	197		Insert dash between "above ground", see line 191.		Accept	Above ground changed to above-ground, same with below ground
E_5_0049	Federici, Sandro	5	203	251	5.2.1.1	Why this section here? Whether you have not additional guidance to provide on some pools/data/information you should simply refer to the 2006 IPCC Guidelines. Avoiding lengthy repetition should be a must in order to avoid potential inconsistencies and have a more "readable" book.		Reject	The authors of this supplement have collectively agreed to make the document a "stand-alone" guide, therefore it is necessary to quote the 2006GL as is practical (ex. equations, methods) taking care to be consistent with 2006GL.

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E_5_0050	Brown, Lynette	5	204	204		Be consistent on spelling of above-ground and below-ground throughout Chapter.		Accept	Above ground changed to above-ground, same with below ground
E_5_0051	Brown, Sandra	5	204	251		why include all this material if it just refers reader to AFOLU VOL 4--surely enough to say what this section is adding--not repeating what is already known--so up front say that this chapter is adding ...and then state clearly--thenmove directly into section 5.2.1.2 the pool with new GL i assume		Reject	The authors of this supplement have collectively agreed to make the document a "stand-alone" guide, therefore it is necessary to quote the 2006GL as is practical (ex. equations, methods) taking care to be consistent with 2006GL.
E_5_0052	Ometto, Jean Pierre	5	210	211		Wetland vegetation might present lower growth rate than upland vegetation, potentially showing higher wood density;		Accept with modification	This comment is similar to comment G21. To address G21 as well as this comment, we agree to add the following text: "For lower Tier methods it may be assumed that wetland vegetation does not have substantially different biomass carbon densities than upland vegetation (e.g. Bridgham et al., 2006). However, if country specific data is available, it is good practice to use that data to estimate biomass carbon densities."
E_5_0053	Penman, Jim	5	210			Say 'than does upland...' (editorial only)		Accept	Text changed
E_5_0054	Federici, Sandro	5	212	212	5.2.1.1	Carbon-Stock-Change Factors is a more appropriate language		Accept	We changed "Emission/Removal" to "Carbon Stock Change".
E_5_0055	Federici, Sandro	5	216	217	5.2.1.1	A pool cannot be a key category; a pool may provide significant contribution (25-30% or, with others summing up to 60%) to a key category		Accept with modification	Text modified to "if carbon stock changes in biomass or dead organic matter sum up to be a large fraction (>85%) of a key category. "
E_5_0056	Ometto, Jean Pierre	5	217	217		What does "key categories" represent? Importance in relation to C stocks? If so, those are important per se		Noted	We requested adding "key category" to the Glossary.
E_5_0057	Brown, Lynette	5	219	219		Insert dash between "land use" for consistency.		Accept	Text changed
E_5_0058	Sato, Atsushi	5	230	244		More precise explanation how activity data area should be obtained is needed. For instance, it is not so clear that project boundary area for wetland restration or wetland creation is needed or area which affect underground water like Ramsar Convention requires is needed. It is not so easy to imagine which statistical item in national statistics can be regarded as wetland restration or creation for all inventory compilers.		Accept with modification	See lines 415-422 in Ch 1 Supp (section 1.8) for relevant text to add in part. For the SOC stock change, we are only providing guidance to wetland rewetting on cropland, so may be able to suggest land-owners as source of information (ex. for US, farmers file a land use plan with NRCS).
E_5_0059	Sato, Atsushi	5	230	244		Tier.1 EF is established for wetland restoration and wetland creation only. Thus, "obtaining data for whole IWMS" and "activity data used for calculation" does not mean same. It should be explained more clearly that what area data or activity data should be obtained for calculation and that area does not have EF must be identified or not. As, IWMS is a sub category in each of the six land use, to obtain whole IWMS may not be needed from the point of view of effectiveness of inventory preparation.		Accept with modification	The guidance in our chapter applies to IWMS in all land use categories for SOC stocks, and for long-term cultivation and wetland re-wetting on Cropland, and wetland re-wetting and creation in any land use category. Therefore it is required to identify all managed IWMS in all land use categories. We will add text to clarify these points and what activity data is needed for each EF.
E_5_0060	Sato, Atsushi	5	230	244		Explanation how the starting year of restoration or creation is assumed may be needed.		Accept with modification	We have changed the term "wetland restoration" to "rewetting" throughout. And we will clarify that the first year is equal to the first year that the water level is raised.
E_5_0061	Ometto, Jean Pierre	5	236	236		Although no organization catalogues changes in area as a result of [...] this is unclear		Noted	We consider this statement to be clear.
E_5_0062	Penman, Jim	5	237			I think this should say 'wetlands with IWMS restored...'		Accept	Text changed to "wetlands with rewetted IWMS"
E_5_0063	Ometto, Jean Pierre	5	238	242		[...] may be obtained from agricultural, forestry, or natural resources agencies,non-governmental conservation organizations, or other government sources [...]. Parties need to show the scientific robustness of this sort of information		Noted	Countries are allowed to choose their sources of information and to provide IPCC with a description of its robustness
E_5_0064	Wang, Xiaowen	5	240	240		the address "http://www.wer.org" should be updated to "http://www.ser.org"		Accept	Changed
E_5_0065	Brown, Lynette	5	247	247		Insert dash between "land use" for consistency.		Accept	Changed
E_5_0066	Ometto, Jean Pierre	5	247	248		[...] uncertainty can arise from 1) uncertainties in land use [...]. Mapping? Classification? Clarification needed		Accept with modification	We amended the sentence to say "1) uncertainties in the mapping of lands, land use classification, and/or management activity data"...

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E_5_0067	Brown, Sandra	5	252	284		a large part of this section repeats introduction --leave here and reduce intro section. Given that this ch adds very little why all the background literature review--is this new and not anywhere else. Why are these GL written like academic review papes with guidance added on. as i have said many times above, they are to make these short and user friendly so that they get used.....a lot of background can be moved to annexes. The 1996 GL had a separate volume of details such as in this chapter (and others). I urge you to think of the user of this material and move all background in all chapters to an annex and keep the steps up front clearly and succinctly presented.		Agree with modification	We will remove any repetitive text as much as possible from this section; we prefer to keep much of the information in the Introduction to aid the user. We will move the "General Background" (5.1.1) to an Annex.
E_5_0068	Junsheng, Li	5	253	253		Soil C stocks in IWMS are mainly influenced by changes in water level, temperature, and et al.		Accept	We will add "mainly" and "temperature" to the sentence.
E_5_0069	Ometto, Jean Pierre	5	255	256		[...] after removal from active cropping and restoration of natural hydrologic conditions [...] this sentence seems unnecessary		Reject	This sentence is necessary to explain what we are covering for SOC stocks.
E_5_0070	Ometto, Jean Pierre	5	287	289		Isn't there any change necessary to Decisions Tree for mineral soil in the Ch.2, 2006 IPCC Guideline concerning IWMS? Need clarification		Reject	No changes are necessary for this Decision Tree.
E_5_0071	Ometto, Jean Pierre	5	326	326		In Table 5.2, is n" number of sites? Replicates? Studies?		Accept	We will change "n" to Sites and make a footnote on what n/a is.
E_5_0072	Brown, Lynette	5	259	259		Poff et al., 1997 is not listed in the References - please add to References or delete from text.		Accept	Reference added
E_5_0073	Lyde, Gund	5	259	259		Poff et al., 1997 not listed in references.		Accept	Reference added
E_5_0074	Sato, Atsushi	5	292	303		Line 236~242 explained that " no organization catalogues changes in area as a result of wetland restored or created....local activity data ...may be obtained from..." This can create difficult situation that inventory compilers in each country obtains activity data. Tier.1 calculation is able to be conducted only when area of wetland restored or created are obtained. It is necessary how inventory compiler will do in the case that they could not find any good activity data of area wetland restored or created.		Noted	We agree with the comment that it is difficult to obtain activity data for restored (rewetted) and created wetlands but countries need to contact the types of groups listed in Ch 5 to gain this information.
E_5_0075	Federici, Sandro	5	294	294	5.2.1.2	add "transition" between "finite" and "period"		Accept	Text Changed
E_5_0076	Brown, Lynette	5	295	295		It may be helpful to readers if you could include Equation 2.25 since the text defines the terms in the equation.		Accept	Equation included
E_5_0077	Federici, Sandro	5	295	301	5.2.1.2	The explanation of the IPCC default method for reporting SOM stock changes in mineral soils is not correct. Since it is not needed, I suggest to delete all the text contained in these rows, and simply refering the 2006 IPCC Guidelines.		Accept with modification	We added the following text from Chap. 2 of Vol. 4 from 2006 Guidelines after the first phrase: Two assumptions are made for mineral soils (see details on Section 2.3.3.1 of Chapter 2 on Volume 4 of the 2006 Guidelines): (i) over time, soil organic C reaches a spatially-averaged, stable value specific to the soil, climate, land-use and management practices; and (ii) soil organic C stock changes during the transition to a new equilibrium SOC occurs in a linear fashion.
E_5_0078	Blujdea, Viorel	5	299	301		Repetition: meaning is also highlighted in lines 277-..., although it adds value		Noted	No change
E_5_0079	Blujdea, Viorel	5	305	307		If the country uses "actual C stock" as measured in a specific year by a national soil inventory, then factors tabled can not be applied as such. What is the advice here ? Under general lack of data, some expert adjustment of tabled factors is necessary. This affects both accuracy and precision, indeed.		Accept	National soil inventories should be used if available instead of the default values in Table 5.2. If the inventory has only occurred once, then the stock changes are a function of the stock change factors only. We added the reference to Table 5.2 to clarify that for Tier 1, default soil C can be used.
E_5_0080	Blujdea, Viorel	5	316	319		Since the SOD very well proposes specific chapters for "future methodological investigations" these lines would better go there in order to reduce the length.		Reject	We disagree. Modeling at the tier 3 level is an acceptable method and needs to be discussed here, not in the future methodological development section.
E_5_0081	Hirota, Mitsuru	5	326	327		Why the target depth is only 0-30cm? I suppose it is too shallow to estimate SOC pool in such the IWMS. I recommend the authors should mention on this problem in this or other part, such as UNCERTAINTY ASSESSMENT.		Accept	We agree that deeper soil pools can be used if data is available. We will insert this text from the 2006 guidelines to clarify this issue. "For Tier 1 and 2 methods, soil organic C stocks for mineral soils are computed to a default depth of 30 cm. Greater depth can be selected and used at Tier 2 if data are available, but Tier 1 factors are based on 30 cm depth."
E_5_0082	Xie, Yonghong	5	326	327		if possible, change "Error (SD)" into "standard deviation" or "uncertainty range (95% confidence level)" to remain consistence in style		Accept	Meet with Group
E_5_0083	Federici, Sandro	5	331	331	5.2.1.2	Tier 1 can be applied also to approaches 2 and 3. So, please delete the following text: "(when using Approach 1 activity data)"		Accept	Text changed

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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_5_0084	Brown, Lynette	5	335	337		Insert dash between "land use" for consistency.		Accept	Text changed
E_5_0085	Ometto, Jean Pierre	5	343	343		Suggetion: move "in Table 5.5 (Chapter 5, 2006 IPCC Guidelines)" to the end of the phrase		Accept	Text changed
E_5_0086	Ometto, Jean Pierre	5	344	344		Would this method reduce the bias (why?) or uncertainty?		Accept	We replaced bias by uncertainty
E_5_0087	Xianguo, Lu	5	346	347		What is the scientific basis for the default time period of 20 yr and the influenced soil depth of 30 cm? Considering the fact that wetland reclaimed to cropland in Northeast China, far more than 30 cm of upper soil layers will be converted.		Accept with modifications	The 20 year guideline is an IPCC default for when carbon is in equilibrium following change. Countries can use other time periods when appropriate. We agree that deeper soil pools can be used if data is available. We will insert this text from the 2006 guidelines to clarify this issue. "For Tier 1 and 2 methods, soil organic C stocks for mineral soils are computed to a default depth of 30 cm. Greater depth can be selected and used at Tier 2 if data are available, but Tier 1 factors are based on 30 cm depth."
E_5_0088	Wang, Xiaowen	5	348	350		These two sentences are ambiguous, as it is difficult to judge wether the natural hydrology has been restored. Furthermore, here did not give the solution for the condition under intermediate stage, where restoring actions have been carried out but the natural hydrology have not been completely restored.		accept with modification	We assume that the natural hydrology is returned immediately. We will add text clarifying that.
E_5_0089	Brown, Lynette	5	357	358		Insert dash between "Land use" for consistency in Factor value type boxes.		Accept	Text changed
E_5_0090	Blujdea, Viorel	5	357	358		I'm wondering if a value of 0.71 really can reflect the possible change in such soils, because "long term cultivation" means that soils are under annual crops. It looks to me little small having in mind that such lands are often not cultivated for years because of high underground water levels in sping and practically enrich naturally under vegetation and missing soil cultivation.		Noted	Our extensive data base indicates that 0.71 is the mean for the fraction of C following cultivation. See annex 5A.1 for description of the method to develop the estimate.
E_5_0091	Blujdea, Viorel	5	391	391		If the country uses "actual C stock" as measured in a specific year by a national soil inventory, then factors tabled can not be aplied as such. What is the advice here ? Under generell lack of data, some expert adjustment of tabled factors is neccessary. This affects both accuracy and precession, indeed.		Accept	National soil inventories should be used if available instead of the default values in Table 5.2. If the inventory has only occurred once, then the stock changes are a function of the stock change factors only. We added the reference to Table 5.2 to clarify that for Tier 1, default soil C can be used.
E_5_0092	Brown, Lynette	5	397	398		Insert dash between "land use" for consistency.		Accept	Text changed
E_5_0093	Sato, Atsushi	5	403	417		Tier.1 EF is established for wetland restoration and wetland creation only. In this regards, explanation of activity data can focus how wetland restoration and wetland creation data are obtained.		Accept with modification	See lines 415-422 in Ch 1 Supp (section 1.8) for relevant text to add in part. For the SOC stock change, we are only providing guidance to wetland rewetting on cropland, so may be able to suggest land-owners as source of information (ex. for US, farmers file a land use plan with NRCS). Add "This requires country-specific data and resources, and these sources likely vary among countries".
E_5_0094	Ometto, Jean Pierre	5	412	417		Although no organization catalogues changes in area as a result of [...] this is unclear		Noted	We consider this statement to be clear. (same as E61)
E_5_0095	Wang, Xiaowen	5	414	414		the address "http://www.wer.org" should be updated to "http://www.ser.org"		Accept	Text changed
E_5_0096	Blujdea, Viorel	5	425	425		In case of using a "proxy", like indirect estimation of area based on vegetation type, for the soil type, the representation method should be also described		Accept	Added the text at the end of paragrah: "In the case of using methods such as models, and/or use of data as proxies for estimation, clear and complete documentation is encouraged for transparency".
E_5_0097	Ometto, Jean Pierre	5	431	431		An equation summarizing the calculation steps for Tier 1 could be useful		Accept with modification	Added equation under "Choice of Method, Tier 1"
E_5_0098	Lyde, Gund	5	431	451		Very clear set of instructions. Direct and to the point. Written in the active voice. Thanks!		Noted	
E_5_0099	Brown, Sandra	5	431	455		I like this and I think such an approach should be in each ch of this report--this istaking the user into consideration. I would add an actual calculation too using the steps. Each ch should be set up this way with all the scientific literature review added to an annex in each vol		Accept with modification	We will refer to Vol4/Ch5 section 5.2.3.4 for example calculation for long-term cultivated mineral soils. We will move Section 5.1.1 to become the first Annex, and ensure to cite this Annex within the main text where more information is provided.
E_5_0100	Federici, Sandro	5	434	434	5.2.1.2	This "inventory time period" is not an appropriate language for the GHG inventory. A GHG inventory is composed by timeseries of data and associated estimates. So a better language is "Organize data into timeseries according with the years in which activity data were collected".		Reject	This text is copied from the 2006GL from section 5.2.3.4 (Vol4/Ch5) for SOC stock change calculation for mineral soils. This is the correct language.

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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_5_0101	Federici, Sandro	5	436	438	5.2.1.2	According with previous comment replace: "...at the beginning of the first inventory time period" with the following text: "...for each inventory year of the timeseries". Indeed, in each year an activity can be started and, if it starts, from that year it will be tracked. Further, delete the text of rows 437-438.		Reject	This text is copied from the 2006GL from section 5.2.3.4 (Vol4/Ch5) for SOC stock change calculation for mineral soils. This is the correct language. Perhaps there is confusion for the reviewer that we are referring the GHG emissions (e.g. CO2 flux) rather than SOC stock change?
E_5_0102	Garcia-Diaz, Cristina	5	440	440		step 4 should allow the use of SOCREf that could be included in the EFDB of the IPCC after the adoption of this supplement.		Noted	Once the Supplement is adopted the SOCREf in Table 5.2 will be available in the EFDB.
E_5_0103	Federici, Sandro	5	442	442	5.2.1.2	it should be "Step 3"		Accept	Steps 2 and 3 were changed accordingly.
E_5_0104	Federici, Sandro	5	446	446	5.2.1.2	According with previous comment replace: "...for the inventory time period" with the following text: "...for the inventory year". Indeed, in each year an activity can be started and, if it starts, from that year it will be tracked.		Reject	This is consistent with 2006GL.
E_5_0105	Federici, Sandro	5	447	449	5.2.1.2	This step should be redrafted as follows: "Step 7: Compare among years areas of IWMS under different management systems and, when a change in management is detected from the previous inventory-year to the current inventory-year estimate the final soil organic C stock (SOC0) under the current management system by repeating Steps 1 to 5 using the same native reference C stock (SOCREF), but with land-use, management, and input factors that represent conditions for the managed land in the current inventory year."		Reject	The suggested text essentially says the same thing that is written, which is consistent with the 2006GL.
E_5_0106	Federici, Sandro	5	455	455	5.2.1.2	also this step should be redrafted as follows: "Repeat steps 2 to 8 for each inventory year of the timeseries"		Reject	This essentially says the same thing, and is consistent with 2006GL.
E_5_0107	Ometto, Jean Pierre	5	458	459		[...] uncertainty can arise from 1) uncertainties in land use [...]. Mapping? Classification? Clarification needed		Accept	Added the text after mapping..."for the purposes of classification under soil or vegetation types and management activities, for example"
E_5_0108	Radunsky, Klaus	5	463	464		The expression "the three board categories" needs further clarification. The following wording is suggested: "the three broad sources of uncertainties".		Accept	We changed the wording as suggested.
E_5_0109	Schlesinger, Peter	5	464	464		Typographic error "board" should be "broad"		Accept	Text changed
E_5_0110	Ometto, Jean Pierre	5	467	468		[...] and still continue even with advances in technology and remote sensing techniques (Hirano et al., 2003), this reference is outdated for this statement		Accept	Changed to Arnesen AS et al., 2013.
E_5_0111	Brown, Lynette	5	471	471		Delete the word "on".		Accept	Text changed
E_5_0112	Blujdea, Viorel	5	471	472		A good practice on delineating the IWMS areas should be stated providing advice on some thresholds of maximum limits/expansion in humid years, half way between max/min, etc		Accept with Modification	At a Tier 1 level, this is not possible to address. Even at a Tier 2 it is very difficult. Delineating IWMS areas is based on soil properties (i.e. mineral soils that have formed under aquatic conditions, and are saturated part of the year), therefore IWMS boundaries will not vary with interannual moisture condition. We may add text clarifying this point.
E_5_0113	Brown, Lynette	5	482	482		Insert dash between "region specific" for consistency.		Accept	Text changed
E_5_0114	Blujdea, Viorel	5	489	491		I see the statement on bias exactly in opposite way (or at least sentence is not enough clear to me): Bias has much larger impact on the estimates of C stock than on the "change/difference" in the stocks in two moments in time. Additionally, the effect of bias is much less when change is estimated for land remaining in the same category of use, but it has an obviously uncontrolled impact on conversions (especially under Tier 2 with aggregated data). This may affect conversions between other land categories (CL, GL) and IWMS.		Reject	The bias for C stock changes is potentially larger, as it includes bias (or uncertainty) derived from both the C stock and the stock change factor(s).
E_5_0115	Xie, Yonghong	5	496	496		delete "from managed lands with IWMS", since "we included studies ..... of default emission factors" in line 527-528		Reject	Changing the title of the section could create confusion, since IPCC inventories should be done only on managed land. The inclusion of some data from unmanaged land and its implications is explained in the text
E_5_0116	Brown, Sandra	5	496			this section on CH4 is practically in all chapters--could this not have been put into one technical document added say to chapter 1. I am tired of reading the same thing in each ch dealing with methane.		Noted	Each chapter requires their own section on CH4. We will consider moving background information not needed for calculations to the Annex on CH4.

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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_5_0117	Hirota, Mitsuru	5	503	504		It's potetial misleading expression. At least, they does'nt show such the result.		Accept with modification	After looking at the data in the paper, we agree. See Response in comment E 120 for changes.
E_5_0118	Brown, Lynette	5	504	504		Insert "the" after the word "when".		Accept	Text inserted
E_5_0119	Federici, Sandro	5	504	504	5.2.2	replace "greater" with "lower"		Accept	Text changed
E_5_0120	Ometto, Jean Pierre	5	504	504		Suggestion for rewording: "when the water table was lower than 0.1m from the soil surface, CH4 was not emitted at the soil-atmosphere interface		Accept	We will change the wording as suggested.
E_5_0121	Wiseman, Michael	5	504	504		third word should be THE		Accept.	
E_5_0122	Penman, Jim	5	519			I think 'Despite' should be replaced by 'With'		Accept	Text changed
E_5_0123	Bedard-Haughn, Angela	5	526	528		I think the approach of using CH4 emissions from natural wetlands to predict CH4 from restored/created wetlands could potentially overestimate CH4 from these new wetlands, which will take some time to accumulate the levels of organic matter that serves as substrate for CH4 emissions. By the same logic, one could use CH4 emissions from the dry phase of temporary wetlands to predict CH4 emissions from drained wetlands (for example, work done in the Prairie Pothole Region). It would be an approximation but might be more appropriate than neglecting this potential sink altogether.		Reject	We used our available data to test whether there is a significant difference in natural and restored wetlands and found no significant difference (see column M, add this to Annex). In addition, once a threshold OM content is reached after rewetting then the wetland moves into the organic soil subcategory, with different EF. A tier 1 assumption of zero CH4 emission for drained IWMS is the best that can be determined at this time due to the very small available dataset.
E_5_0124	Ometto, Jean Pierre	5	542	542		replace: "with mineral soil" by "with Inland Wetland Mineral Soils"		Accept	Text replaced
E_5_0125	Sato, Atsushi	5	546	547		More pecised explanation may be needed how the situation of "water table level has been raised" is considered when obtaining activity data.		Accept with modification	We will add a statement describing possible ways that the water table level may be raised, including things such as blocking drainge ditches, removing drainage tiles, installing dams thereby increasing intermittently flooded area, etc. Will also cite the Glossary for "Rewetting".
E_5_0126	Bedard-Haughn, Angela	5	555	561		The importance of hydroperiod is a key point and should be considered for all GHG, including N2O when it is eventually added to the guidelines.		Accept with modification	We agree. See Tier 2 method (line 558-564) and Annex 5A.2 for the discussion of considering hydroperiod for CH4; for N2O we will add a statement in the "Future Methodological Development" section addressing the importance of considering hydroperiod.
E_5_0127	Wiseman, Michael	5	557	557		fourth word should be THE		Accept	Word added
E_5_0128	Brown, Lynette	5	559	559		Insert "or" after the word "at".		Accept	Word added
E_5_0129	Song, Changchun	5	559	559		Add "or" after at.		Accept	Word added
E_5_0130	Song, Changchun	5	561	561		.....of riparian wetland), evapotranspiration and precipitation et al..		Accept	Text added
E_5_0131	Brown, Lynette	5	576	576		Abbreviate emission factors as EFs (see line 579).		Accept	EFs used
E_5_0132	Ometto, Jean Pierre	5	581	581		The calculation used for estimating the uncertainty range need to be presented (suggestion: locate clarification text on item 5.2.2.4)		Accept with modification	We will provide the equation in the annex 5A.2
E_5_0133	Brown, Lynette	5	581	582		Format dashes in table for consistency.		Accept	Changed



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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_5_0134	Sato, Atsushi	5	583	596		More pecised explanation may be needed how the situation of "water table level has been raised" is considered when obtaining activity data.		Accept with modification	We will add a statement describing possible ways that the water table level may be raised, including things such as blocking drainge ditches, removing drainage tiles, installing dams thereby increasing intermittently flooded area, etc. Will also cite the Glossary for "Rewetting".
E_5_0135	Wang, Xiaowen	5	589	589		the address "http://www.wer.org" should be updated to "http://www.ser.org"		Accept	Changed
E_5_0136	Blujdea, Viorel	5	612	612		under the chapter Ch. 5.3.1, the assumption of instant oxydation in the year of conversion may not work here for DOM, DW, LT, in conversions. So additional information might be necessary in reporting. The "conversion area" is very much related to how delineation is done and surveyed.		Noted	We agree that the area is related to the quality of the survey which will be country specific. We also agree that the dead organic matter will not be all oxidized in year 1, hence why there is a 20 year transition before the land use change is complete.
E_5_0137	Ometto, Jean Pierre	5	616	616		A decision tree including IWMS could be useful in this Chapter		Accept with modification	We will cite the decision tree in Chapter 1 here.
E_5_0138	Federici, Sandro	5	665	669	5.3.1.2	This is not consistent with text in rows 372-383. Please add similar guidance for the period from 20 to 40 years		Accept	We altered the text to be more consistent with the previous text
E_5_0139	Federici, Sandro	5	670	671	5.3.1.2	A Cropland that is subject to wetland restoration can be converted only to either forest land or wetland. This implies that the FLU of the final land use should be 1 and also that the transition period is by default 20 years. Please amend consequently the text in rows 670-676		Reject	We are dealing with restored wetland on cropland converted to any other LU category. The FLUs given here correspond to the initial land use, not the final LU. This comment is dealing with the final LU, which does not apply to this.
E_5_0140	Federici, Sandro	5	705	765	5.4	This text need to be moved to Chapter 7 to avoid lengthy repetition and potential inconsistencies among text written in different chapters of this report		Accept	We kept text specific to IWMS.
E_5_0141	Ometto, Jean Pierre	5	715	715		Replace "carrying nitrogen" by carrying nutrients		Accept	Changed
E_5_0142	Brown, Lynette	5	739	739		Insert "Quality" befor "Control" as abbreviation designates.		Accept	Changed
E_5_0143	Ometto, Jean Pierre	5	744	744		Classification of land use based on remotely obtained information has progressed rapidly ", this phrase is consistent with comment ref. line 467		Noted	
E_5_0144	Brown, Lynette	5	762	763		Abbreviate emission factors as EFs.		Accept	Changed
E_5_0145	Hirota, Mitsuru	5	766			Information on GHGs emissions and C dynamics as shown here will be biased, and I recommend that the authors should mention other information and/or database, such as GHG-Europe ( <a href="http://www.ghg-europe.eu/index.php?id=8">http://www.ghg-europe.eu/index.php?id=8</a> ) and various FLUX networks. Although various FLUX newroks target mainly CO2 flux, recent studies have monitored but also othe GHGs flux.		Accept	We will add these sources as potential information sources.
E_5_0146	Lyde, Gund	5	767	768		Consider including a table listing countries with the most significant IWMS and the area		Accept	We will investigate the possibility of including; check harmonized world soil database.
E_5_0147	Brown, Lynette	5	771	771		Capitalize c in "croplands" for consistency.		Accept	Changed
E_5_0148	Lyde, Gund	5	775	785		Shouldn't these 'be listed in the reference section and just cited here?		Reject	We want to address the readers to this document in a more direct way, instead of having them looking at the reference list. This is an important example that should extend out.
E_5_0149	Brown, Lynette	5	800	800		Sould Liebig et al., 2011 be 2012 (see line 950)?		Accept	Changed to 2012
E_5_0150	Brown, Lynette	5	805	805		Delete space between "waste water" it is one word.		Accept	Text changed
E_5_0151	Yu, Kewei	5	809			Replace "WETLAND-DNDC " with "Wetland-DNDC ", to be consistent with others.		Accept	Text changed
E_5_0152	Brown, Lynette	5	837	838		Appears studies have been listed alphabetically, Bedard should come before Besasie. Also, Besasie et al., 2011 is not listed in References - please add to References or delete from table.		Accept	Text changed. Besasie is 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_5_0153	Xianguo, Lu	5	837	838		The data collected here lack representativeness, Tibetan Plateau (e.g. Zoige) is recommended. Please refer to "Lili Huo, Zhike Chen, Yuanchun Zou, Xianguo Lu, Jiawei Guo. Effect of Zoige alpine wetland degradation on the density and fractions of soil organic carbon. Ecological Engineering 51 (2013) 287– 295".		Reject	This study is for organic soils; we can only use studies for IWMS. We cannot include this study.
E_5_0154	Lyde, Gund	5	837	838		Table 5A.1.1- Besasie et al., 2011 not in references but there is one for 2012. See lines 884-885.		Accept	Same as above
E_5_0155	Lyde, Gund	5	837	838		Table 5A.1.1 - Kim et al., 1998 not in references but there is one for 1999. See lines 943-944		Accept	Kim et al changed to 1999.
E_5_0156	Lyde, Gund	5	837	838		Table 5A.1.1 - Marani et al. 2007 should probably be Marani and Alvala 2007. See lines 959-960		Accept	Replaced by Marani and Alvala, 2007
E_5_0157	Lyde, Gund	5	837	838		Table 5A.1.1 - Consider making location the first column and cells sorted by country. The stock exchange should come next and the studies last. I think users will be more interest in the information about the location than about the study.		Noted	
E_5_0158	Hirota, Mitsuru	5	841			As the authors pointed out in this Chapter, difference of methodology is important issue for GHGs flux estimation. So, I recommend that the authors examine adding information on methodology (such as EC or chamber) into the table 5A.2.1.		Accept with modification	We will add a footnote to the table indicating the studies that use eddy covariance.
E_5_0159	Song, Changchun	5	848	848		The annual period of inundation for the Deyeuixa marshes in the research of Song et al.(2003) was intermittent.		Accept	We will change this (and the analysis for Table 5A.2.2 will be updated for this change).
E_5_0160	Song, Changchun	5	848	848		According to the value of CH4 emission (225 kg CH4 ha-1 yr-1), the annual period of inundation for the natural wetlands(marshes) in the research of Huang et al.(2010) was intermittent.		Accept	We will change this (and the analysis for Table 5A.2.2 will be updated for this change).
E_5_0161	Song, Changchun	5	848	848		Song et al., 2009.		Reject	Reference is correct
E_5_0162	Brown, Lynette	5	848	849		Should Kim et al., 1998 be 1999 (see line 943)?		Accept	Changed
E_5_0163	Brown, Lynette	5	852	853		Confidence intervals are typically a range or +/-, please clarify.		Accept	Will add +/- to column
E_5_0164	Brown, Lynette	5	860	861		Publication year missing.		Accept	Year 2012 added
E_5_0165	Lyde, Gund	5	860	861		Needs year of publication. 2012? See line 157		Accept	Same as above
E_5_0166	Lyde, Gund	5	898	898		Merge with text at 897		Accept	Text merged
E_5_0167	Brown, Lynette	5	907	1046		Ensure reference entries are single-spaced and justified properly.		Accept	
E_5_0168	Brown, Lynette	5	915	915		Publication year missing.		Accept	Year added
E_5_0169	Lyde, Gund	5	915	915		Publication needs date. 1998? See line 80		Accept	Same as above
E_5_0170	Lyde, Gund	5	921	921		Merge with text at 920		Accept	Text merged
E_5_0171	Lyde, Gund	5	971	971		Complete citation - publisher etc		Accept	Reference completed
E_5_0172	Lyde, Gund	5	1010	1010		Merge text with text in 1009		Accept	Text merged
E_5_0173	Brown, Lynette	5	1037	1037		Delete extra period.		Accept	Done

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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_5_0174	Brown, Lynette	5	1039	1040		Publication year missing.		Accept	Year added
E_5_0175	Lyde, Gund	5	1046	1046		Merge text with text in 1045		Accept	Text merged
E_5_0176	Nair, Malini	5	General	ALL		In the chapter, the uncertainty measurements are mentioned as being provided in 2006 IPCC report. The purpose of the report is not satisfied if at least some specific sources of uncertainty are not mentioned		Accept	We discuss uncertainty specific to IWMS.
E_5_0177	Garcia-Diaz, Cristina	5	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.		Accept with modification	To use the guidance in this supplement it is good practice for countries to stratify their managed lands into land use category, soil type, climate region, and management practice. We changed "divide" to "stratify", and "should" to "could" where appropriate. (Same as G72).
E_5_0178	Brown, Sandra	5	general			A lot of hard work has obviously gone into these chapters but in many of them I find they missed the target. I had many problems with these chapters as my comments attached will show. My biggest concern is the apparent limited regard for the user of these materials. Most chapters are written like academic scientific reviews—all such material should be moved to annexes in each chapter. Also I read about CH4 in practically all chapters—could this not have been said once and then added as an annex to Ch 1. It seems a lot of the updates are in relation to CH4. Also it seems that even including these other sources of GHGs will hardly ever be that significant in the grander scheme of things within the AFOLU sector. And even as someone who knows a little about such inventories I did not find these chapters too helpful—but then maybe I missed a key section—perhaps this is in one of earlier chapters. But I would hate to be an inventory person in a country who had to wade through all this detail to find the punchlines.		accept with modification	We have developed our chapter into more of cookbook presentation to help inventory compilers. We have moved some of our data and methods into annexes.
E_5_0179	Bedard-Haughn, Angela	5	General			In general, the chapters I reviewed were well done and I congratulate the authors and contributors on a tremendous amount of hard work. There are still many gaps to be filled in, but as the authors indicate, this reflects the state of the research as much as anything.		Noted	
E_5_0180	Sistani, Karamat	5	General			The lead authors have done a good job on revising the first draft. I do not have any substantial input for the revised chapter 5.		Noted	
E_5_0181	Brown, Sandra	5	table 5.2			I completely disagree with the values for WMS in tropical regions--surely these would be forested for most part of even herbaceous....the harmonized C stock map of the world shos most of tropical across all cliame types ha carbon stocks to 30 cm of 40-80 t C/ha--and one would expect IWMS to have even higher values than this or be at the high end of the range. and it is likely the wetter the climate zone the higher the C stock in soil based on the typical hydroloogical processes. Need to check the harmonized soil C map and check with some areas you know are IWMS		Accept with modification	The soil C stock values in Table 5.2 are from a specific reference that developed the stock numbers specifically for IPCC reporting. The number of sites for the tropical regions is quite a lot so the mean should be reflective of actual soil C pools. If the reviewer can provide a better reference we will consider it.
E_5_0182	Brown, Sandra	5	table 5.4			need more info on this table--how many samples synthesized--i see the info is in annex but surely can add n to this table. also wouldthese EFs be a function of the C content of the WMS? The average values are small and less than a ton per ha even for tropics--i imagine such a value even when multiplied by the AD will be insignificant...do we really want inventories to be so detailed and try to catch every molecule of CO2e --would not mind if i had confidence in the EF you provide --i understand this is tier 1 but given the range in this table even if measured as in a tier 2 i doubt that for any country this sources of GHG is anywhere near signifiant (>1% of total emissions from AFOLU )--we need to get real about all these gases!		Reject	All the information related to the derivation of the CH4 emission Efs is presented in Annex 5A.2, and there is not a need to repeat it here. The Efs are not a function of the C content of IWMS. The values may be considered relatively small by some, but they are from the published peer-reviewed literature. The IPCC Guidelines call for complete accounting of all GHG.