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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0001	Germany	4	22	33		To avoid confusion and to remain consistent with other chapters the subchapters should be reprhased as follows: "4.1.2 wetlands converted to another land use category 4.1.3 Another land use converted to wetlands" To remain consistent, then Subchapter 4.3 would be "Wetlands converted to another land use category" and 4.4 Other land use converted to wetlands".		Accept with modification. The outline and chapter structure were significantly changed to address reviewer comments.
G_4_0002	Australia	4	124	1544		The supplement uses the term wetland as both a Land-Use Category and an ecosystem type under multiple Land-Use Categories. This results in some possible convoluted language and may cause result in confusion, particularly in explaining methods in the context of the land-use remaining land-use and land coversion categories. Given that the allocation of coastal wetlands to a land-use category could vary depending on national criteria, this chapter would more usefully be presented as methods for estimating the impact of management change and ongoing management of coastal wetlands (the ecosystem type). With such a change, only one paragraph would be required to provide guideance on how to report these into the appropriate land-use category depending on national criteria		Accept
G_4_0003	USA	4	128			It is curious why > 0.5 ppt (the "oligohaline" boundary) is the cut-off here and throughout the text, as tidal freshwater marshes are often of lower salinity than that. Tidal freshwater marshes are not only those that are subject to direct influence from seawater. They are also those marshes that are landward of seawater excursions but still under the influence of tidal fluctuations.		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0004	Australia	4	129	131		The definition of coastal wetlands is broad to the extent of being inoperable. The definition notes that 95% of seagrass meadows are found shallower than 40 metres. However some countries have seagrass extending as deep as 60 metres. In these cases, remote sensing would not be able to identify the extent or changes to these sea grass meadows. This definition should be reconsidered and applied to take into account country's national circumstances and capabilities. Proposed redrafting: "Coastal wetlands are wetlands at or near the coast that are influenced by saline or brackish water and/or astronomic tides. Countries should document how the definition of coastal wetlands will be applied to their national circumstances, including the seaward limit of coastal wetlands. Coastal wetlands may occur on both organic and mineral soils. Brackish/saline water is water that contains 5000 or more parts per million (PPM) of dissolved salts. ‘Inland wetlands’ are not ‘coastal’. "		Accept
G_4_0005	Japan	4	130	131		Considering each country's situation, the definition of the boudary should be decided by each country.		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0006	Australia	4	136	146		Suggest that the chapter be restructured so as to present methods for estimating the impact of management change and ongoing management of coastal wetlands (the ecosystem type) irrespective of land-use category. This section could be redrafted more along the lines of 1) coastal wetaland can be classified as both a Wetland land use Category or as an ecosystem type under different Land Use Categories depending on national criteria 2) Depending on how coastal wetlands are classified changes in mgt may or may not result in a land-use change. 3) As such not possible to definitively classify methods into lands remaining or land conversion categories. 4) The supplementary guidance is therefore structured to aid inventory compilers to identify the key management activities that have signficant impacts on emissions and removals and provide guidance on how to estimate them. 5) Countries can then report these emissions and removals in the appropriate land use category considering their national criteria for classifing coastal wetlands.		Accept
G_4_0007	Australia	4	137	139		It is not immediately apparent what the difference between " land converted to another land use category in which the land that is converted is a coastal wetlands" and "conversion to a land-use category that included coastal wetlands" is. This may result in confusion.		Accept
G_4_0008	Germany	4	137	139		what is the difference between a category in which the land that is converted is a costal wetland and a category that includes coastal wetlands?? Please insert an example.		Accept with modification. This text was deleted.
G_4_0009	Australia	4	146	150		Suggest you delete these lines. As part of standard procedures inventory compilers undertake key category analysis to identify which categories are key.		Accept with modification. This text was deleted.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0010	Canada	4	147	149		While it is noted that explanations of "key" and "significant" are provided in the 2006 IPCC Guidelines, these are important for the reader in understanding this statement. It raises the question of when a reader should be referenced to another IPCC report and when the details are provided in this Supplement or its Glossary.		Reject. It was decided by authors not to repeat definitions in 2006 GLs with references to the 2006GLs made instead in order to reduce duplication and keep text length to a minimum.
G_4_0011	Spain	4	156	157		Table 4,1,: this is not a complete list of activities. There are other activities that have not been included, for example, some activities with a positive impact on wetland conservation, and that should also be listed (e.g. good management practices, restoration of wetlands, etc). Or at least, the title of the table should be changed to "examples of management activities....", to make sure that there is not any measure excluded.		Accept with modification. Only specified activities are included
G_4_0012	Canada	4	157	157		Consideration should be given for consistency between chapters in what sub sections are used. For instance, here "What is not covered in this chapter" is quite useful, but it is not clearly delineated as such in all chapters. Greater explanation about why the scope of the chapter is set the way it is may also be helpful to the reader.		Accept with modificaiton. Text was clarified.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0013	Spain	4	164	170		The role of nutrients by enhancing aquatic productivity (and thus a possible sink for carbon removed from the atmosphere) should be considered for the balances of carbon emissions of wetlands. This, when possible, could be quantified separately for different types of primary producers, as the sink capacity of phytoplankton is not the same than that of rooted plants, or even for rooted plants, the balance would depend, for example, on the proportion of aerial parts vs belowground parts. A mention to this fact should be included in the document.		Accept with modification Text was deleted.
G_4_0014	Chile	4	166			I think it's better to say nitrogen directly rather N; N, refers by himself to Nitrogen Atom		Accept with modification. This is an abbreviation.
G_4_0015	Australia	4	173	175		The special considersations may better include a) how to identify coastal wetland ecosystems, b) allocation of coastal wetlands to IPCC Land-use categories based on national criteria, c) Identification of managed coastal wetlands and key management changes and activities that impact emissions and removals, d) identification of coastal ecosystem sub-types and e) identification or soil type. (see additional comments at lines 124 and 136 on why this change is suggested)		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0016	Australia	4	187	189		The Guidance appears to take a broad assumption that accurate and complete data is readily available to inventory compilers. For areas covered in this chapter, particularly seagrass meadows, complete time series of areas are unlikely to be freely available to inventory compilers, and some cases may not exist. The Guidance should accurately reflect the practical availability of data. This should occur through moving sections relating to seagrass and CH4 emissions from nutrient enrichment to an annex, and therefore providing countries an opportunity to voluntary report this information where the availble scientific information and data supports such a decision.		Accept with modification. Nutrient enrichment section deleted. Additional activity data provided for seagrass activities.
G_4_0017	Australia	4	189			Should "Wetlands" here read "Coastal wetlands"		Accept
G_4_0018	Japan	4	189	191		The concept is understandable, but it may be difficult for some countries to identify boundary of coastal wetlands and obtain activity data at reasonable cost.		Accept
G_4_0019	USA	4	189			Insert "Coastal" before "Wetlands"		Accept
G_4_0020	Australia	4	192			Should "wetlands" here read "coastal wetlands"		Accept with modification. Text deleted.
G_4_0021	Australia	4	195			There should be an additional step here which is "B. Allocate coastal wetland to IPCC land-use category according to national criteria" Good practice comment here would be that countries clearly document these criteria.		Accept with modification. Text deleted.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0022	Australia	4	195	205		This para may require review to ensure it does not provide conflicting messages about what is "managed land". Current focus in on management ACTIVITIES. The managed land proxy as outlined in Chapter 1 results in a very broad definition of manged land which may cover greater area of coastal wetland than is covered by the management activities identified in the supplement. For example coastal wetlands may be in conservation reserves but with no direct creation or restoration activities. Perhaps two steps are needed here: 1) identify area of managed coastal wetland. and 2) identify area of key management changes and activities that impact emissions and removals.		Accept with modification. Text deleted.
G_4_0023	USA	4	196			insert "proxy" after "land"		Accept.
G_4_0024	USA	4	199			insert "organic matter in" after "...oxidation of"		Accept.
G_4_0025	USA	4	200	201		change #3 to: "3) affect more than one carbon pool or non-CO2 flux."		Accept.
G_4_0026	Australia	4	206	212		Should this be section be titled "Identify Ecosytem Sub-Type". Remaining text in this section should therefore focus on identifying whether lands are mangroves, tidal marshes or sea grasses as the "EF" data differs signficantly between them. The current text appears to be concerned with a discussion of IPCC land use classifications which may create confusion and does appear directly applicable.		Accept with modification. Text deleted.
G_4_0027	Germany	4	221	226		first it should be stated in which LUC the piece of land in question belongs to. For the example of fish pens : are they categorised as settlements and were converted to wetlands? Or vice versa? by what action?		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0028	USA	4	241	244		This definition is way too general to use to distinguish mineral soils from organic soils and will lead to incorrect classification. Not all soils along rivers in estuaries are mineral soils. It depends on the hydrogeomorphic position of the marsh, the salinity, the size of the estuary, etc. We think a clear description of the basic differences in a soil profile between organic and mineral would be very important to include here.		Accept with modification. Additional clarification provided along with a third solution in the case that a nor b can be applied.
G_4_0029	Australia	4	245			Suggest chapter removes split into land remaining and land coversion categories given complexity of IPCC land classification for wetlands. Suggest this section is renamed to reflect, for example "Management changes and ongoing management activities that impact coastal wetland emissions and removals"		Accept
G_4_0030	Germany	4	245	456		the choice of the terminology is confusing. regardless of the land use category the land in question belongs to, the emissions and removals are the same, independent of the category in question. what counts are the different management activities applied to this piece of land, not the category in which it is reported. It is also not clear why the listed activities would mean that the land remians in the same category. a description of possible management activities would be enough accompanied by examples of possible changes of land use category.		Accept
G_4_0031	Australia	4	246	253		Suggest redrafting along lines of "This section describes the key management changes and ongoing management activities that impact coastal wetland emissions and removals. The allocation of these emissions and removals into the IPCC land-use categories will depend on national criteria."		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0032	Australia	4	246	429		It would greatly assist inventory compilers if this section could give a clearer outline of which of the possible emission sources discussed are actually required for reporting (ie which pools, gases). To improve readability please consider using dot points to communicate the most important points.		Accept with modification. Section length reduced, less critical activities removed, and restructured for clarity.
G_4_0033	Canada	4	255	256		Suggest reviewing use of the words "most important" here.		Accept.
G_4_0034	Australia	4	267	271		This section states that there is "considerable uncertainty regarding N2O and CH4 fluxes associated with aquaculture and additional research is necessary." The section then goes on to say that "Chapter covers....N2O emissions only during the period when ponds are being stocked." Given the uncertainty and need for additional research, it may not be appropriate to require countries to estimate these emissions. The Guidance should accurately reflect the state of existing knowledge and research. Where there is a need for further research, it would be more appropriate to move these sections to an annex, and therefore provide countries an opportunity to voluntary report this information where sufficient information available relating to that particularl countries national circumstances is sufficiently robust to support a decision to report.		Accept with modification. Tier 1 data have been provided and acctivity data avilable are identified. This clarification has been provided
G_4_0035	Canada	4	272	282		The comment that fish farming is rapidly expanding in Asia is made, but there appears to be no justification as to why the reader was told this. The rest of the text describes fish farming methods but does not identify whether they are specific to Asia.		Accept with modification. Sentence was deleted, but the method for N2O is valid here for aquculture.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0036	Australia	4	296	304		Dredging activities do not always necessarliy lead to loss of coastal wetlands as stated, given the advancement in dredging technology and also environmental legislaton and monitoring requirements that may be imposed by national or local-level governments. The guidance should recognise these developments and provide further guidance on preparing inventory reports in light of these developments.		Accept with modification. Sentence was rephrased and additional sources of activity data provided.
G_4_0037	Australia	4	300	304		This section on estimating emission from filling may be confusing. Clarity is required regarding whether it refers to ongoing emissions and removals on filled land or the difference in C stock between extracted soils and new fill soils.		Accept.
G_4_0038	USA	4	309			2 typos in this line.		Accept.
G_4_0039	USA	4	312			The "Gulf" region should be specified, which gulf? This document will be used by an international audience, so clarity is of high importance.		Accept
G_4_0040	USA	4	319			mangrove wood is used for home construction as well as boat construction (e.g., outrigger canoes)		Accept with modification. The chapter addresses wood harvest to include all activities requiring haresting of wood.
G_4_0041	Australia	4	335			This line implies that Co2 emissions should be reported for seagrass meadows where there is harvesting of aquatic resources. Yet Table 4.2 has NA for this category.		Accept. Text deleted.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0042	USA	4	338			All of the N inputs you mention here are covered by other IPCC Guidance (Chapter 11 2006 GL). My understanding from text earlier was that you were only acounting for new N inputs from activities on the site e.g. aquaculture.		Accept. Text deleted.
G_4_0043	Australia	4	343	362		Suggest this section may be shortened.		Accept.
G_4_0044	USA	4	343	362		In this section, we think it might be good to mention that human activities that lead to changes in species composition in wetlands also can influence the carbon sequestration and storage in wetlands. Human activities that lead to the invasion of different species, or to the loss of species diversity can change the impacts on carbon storage. There are many other references that would be good to cite, but one of my papers also covers this topic looking at how different species affect methane production. Sutton-Grier, A.E. and J.P. Megonigal. 2011. Plant species traits regulate methane production in freshwater wetland soils. Soil Biology and Biochemistry 43:412-420.		Reject. Beyond the scope of the guidance
G_4_0045	USA	4	343			We would say "...effects OF nutrient availability..."		Accept.
G_4_0046	USA	4	344			"...ARE not well understood..." instead of "is"		Accept.
G_4_0047	Germany	4	351	351		For clarity, suggest changing "fertilisation may result in no, or perhaps decreased, rates of carbon sequestration" to " fertlization may result in decreased rates of, or perhaps no carbon sequestration"		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0048	USA	4	356	358		This sentence should be part of the paragraph above to assure inventory compilers that indirect N from other sources is not being double counted.		Accept with modification. Text deleted.
G_4_0049	USA	4	358	361		Text in brackets is very confusing, please rewrite.		Accept.
G_4_0050	USA	4	359	361		sentence structure makes the meaning difficult to understand.		Accept.
G_4_0051	Australia	4	363	370		It is not clear how countries are to identify lands where "nutrient enrichment" is an issue. In sea grass meadows there are likely to be multiple drivers causing losses (nutrients, harvesting, aquaculture etcetera). It is not clear how countries are to disaggregate emissions and removals into different management categories and how they can avoid double counting.		Accept. Text deleted.
G_4_0052	USA	4	367	370		Rewrite this sentence, poorly written.		Accept.
G_4_0053	USA	4	372	375		This is not exactly correct as stated. The process by which marshes maintain their elevation in the tidal frame is a function of inorganic sediment washed in by the tides and/or watershed as well as autochthonous production, the bulk of which is belowground but also from litter deposited aboveground. Both inorganic sedimentation and organic accumulation can be important in marshes, especially along the fresher end of the spectrum. The relative importance of sediment vs. organic material can actually switch through time in a marsh (Drexler, J.Z. 2011. Peat formation processes through the millennia in tidal marshes in tidal marshes of the Sacramento-San Joaquin Delta. Estuaries and Coasts 34:900,Äì911; DOI 10.1007/s12237-011-9393-7).		Accept. Text deleted.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0054	USA	4	376			We would remove the word "on" in the sentence "...impact coastal ecosystems..."		Accept.
G_4_0055	Spain	4	402	407		If gains in the carbon sequestration capacity are achieved by wetland restoration, restoration activities should also be accounted in carbon balances		Accept. These activities are covered in the guidance.
G_4_0056	USA	4	414			Craft et al. (2003), which is about salt marshes, does not justify a statement about mangroves.		Accept. Rephrased.
G_4_0057	Australia	4	430	455		If you remove the split into land remaining and coversion categories (see comments line 124, 136) these sections may be deleted. The key information from these sections could be included in a general discussion on the issue of land classification in the introduction to the chapter. This may improve clarity by placing all the discussion in one place, and avoiding repetition.		Accept
G_4_0058	Germany	4	430	433		I see the headline and the first sentence in contradiction: the headline gives the impression that the chapter deals with the conversion from all land use categories(LUC) that include coastal wetlands -possibly forest land , grassland, wetland. the first sentence of the chapter gives the impression that conversions from wetlands only to other LUC are regarded. Or does the term LUC that includes coastal wetland is another expression for wetland? if so use wetland only.		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0059	Germany	4	443	448		it is stated that if a coastal wetland is drained a new LUC would necessarily be applied. There are 6 LUC under UNFCCC reporting FL, CL, GL, WL, Settlement, others. Add in line 445 after "applied" in paranthesis "(FL; GL, CL , settlement)". and add in line 446 after "refer" "for estimating emissions and removals from the drained coastal wetland". the last sentence lines 447 to 448 should read "if conversion concerns a LUC with mineral soils..." " results" is understood by non native speakers as meaning a change from one soil type to another.		Accept
G_4_0060	Germany	4	449	455		it is unclear what the chapter is about. There is nothing about conversion in the text. Please clarify or delete 4.1.3.		Accept
G_4_0061	Australia	4	457	488		Recommend removing split between land remaining and land conversion categories. Suggest retitle this secton " Methods for estimating emission and removals". Delete lines 465-488, and revise lines 459-461 to read " This section details methodologies necessary to estimate the impacts of various human activities on greenhouse gas emissions associated with coastal ecosystems. The following sub-sections detail the methods for estimating changes in biomass (secton 4.2.1), DOM (section 4.2.2), soils (section 4.2.3) and for non-CO2 gases ...."		Accept
G_4_0062	Germany	4	457	457		4.2 has the same headline as 4.1.1 it would be preferable to add a qualifier to 4.2 like "emissions and removals from..."		Accept with modification. Text deleted.
G_4_0063	India	4	457	458		The title "Land remianing in land category" , It looks very general so I suggest inclusion of "coastal wetlands" in the title.		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0064	Australia	4	490	494		Change to read " This section addresses estimation of changes in aboveground and below ground biomass carbon pools associated with management changes and activites in coastal wetlands. The reporting of the associated emissions and removals into the the IPCC land-use categories (and the remaining and conversion sub-categories) is determined by the national criteria for allocating these lands. For coastal wetland with mangrove forest changes in...." It is not apparent that there is a sufficient body of knowledge to estimate belowground biomass carbon pools for seagrass meadows. Further research may be required. Given the limited availability of data, reporting of emissions from seagrass should be voluntary, and guidance related to seagrass should be moved to an annex.		Accept with modification. Text was deleted and it was clarified that national criteria be used.
G_4_0065	India	4	490	501	4.21	It is good to state that only perennial biomass needs to be estimated.		Accept
G_4_0066	Finland	4	497	497	4.2,1	There is two times "follow" in the sentence		Accept.
G_4_0067	Australia	4	497	497		text on this line contains a typographical error, suggest deleting the word "follow" at the begnining of the line		Accept.
G_4_0068	USA	4	497			"follow" is in this sentence twice and should only be once.		Accept.
G_4_0069	Australia	4	502			It could be useful to include a summary equation such as that provided for the soils (Equation 4.2) which clearly identifies that there are emissions and removals associated with construction, use and abandonment. This would then provide a context for the information provided in table 4.2		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0070	Japan	4	502	503		At Tier 1, for aquaculture activity, it is assumed that all biomass are removed in the construction phase. However, it does not reflect actual conditions. To improve accuracy of estimates, aquaculture category should be further divided into some sub-categories. Providing estimation equations and default values for each sub-category will be appreciated.		Accept with modification. Tier 2 and above - beyond the scope of Tier 1, countries can provide this information if they choose to, and are encouraged to do so
G_4_0071	Japan	4	502	503		For some “abandonment phase” categories, the Stock-Difference method is provided as Tier 1 approach in Table 4.2 (e.g., aquaculture activity in tidal marsh). It should be noted that, under this method, countries must develop their own biomass stocks data during abandonment phase (Ct2), and some countries need to obtain aerial photographs or implement field survey. Providing alternative approaches (e.g., Gain-Loss method and relevant default data) can help such countries to estimate carbon stock changes at reasonable cost.		Accept
G_4_0072	USA	4	504	516		This description of the choice of method is not clear. Please provide a more step-by-step guidance as is done in other sections of the 2006 GLs		Accept
G_4_0073	USA	4	517	531		The information that is condensed into Table 4.2 should be spelled out more clearly in this section and elaborated in greater detail in order to provide sufficient guidance to the inventory compiler.		Accept
G_4_0074	USA	4	519			The guidance provided here does not appear consistent with what is shown in Table 4.2. Also, don't they need to use Eq. 2.7 as well?		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0075	Australia	4	526			Why is 2003 GPG-LULUCF being referred to rather than the 2006 IPCC GLs		Reject. Determined by authors to be OK to use in this special case
G_4_0076	Australia	4	533	543		Revise sentence to read " Tier 2 methods can be used where country-specific estimates of activity data and emission/removal factors are available or can be gathered at reasonable cost. Tier 2 methods can use the same equations as for Tier 1 and can include additional improvements. For example in the case of seagrasses, the lag time between water clarify impacts and biomass C stock change could be employed where t2 was estimated as a fraction of initial stock" Suggest remaining text be deleted based on: 1) Permanent sampling plots are usually considered Tier 3 methods not a Tier 2 method; 2) development of CS allometric algorthims is not necessary to develop good quality estimates of biomass for this purpose, and again would consider this approach to be more a Tier 3 method; 3) Language is a bit too prescriptive and it is also not clear why 2003 GPG-LULUCF is being referred to; and 4) not for guidelines to state what the priority is - more likely priority is going to be trying to find activity data		Accept with modification. Text was revised to address reviewers concerns however this reference to GPG was Determined by authors to be OK to use in this special case
G_4_0077	India	4	546	553	4.2.1.3	In respect of activity data for tier III approach for different pools, use of spatially explicit data has not been mentioned. It will bring in consistency in the approach if the same is included. In India, in the biennial wall-to-wall forest cover mapping by FSI, change map from each category to each category (activity data) is prepared for all forests including mangrove forests.		Reject. Use of spatialy implicit data is implied and certainly not prevented

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0078	Australia	4	547	553		Change text to read " Tier 3 approach for biomass carbon stock change estimation allows for a variety of methods, including process models or data from statistically-based permanent sampling plots. Tier 3 requires use of detailed national coastal wetland inventories they can be supplemented by allometric equations and models calibraed to national circumstances. Tier 3 methods could involve further stratification of ecosystem type, ecological zone and salinity"		Accept
G_4_0079	Australia	4	557			Replace "should" with "can"		Accept.
G_4_0080	Finland	4	565	565	4.2.1.2	Place the tables 4.3-4.11 containing Efs and other data here. Now they are under "Choice of activity data".		Accept.
G_4_0081	Australia	4	568			Replace "should" with "could"		Accept.
G_4_0082	Australia	4	571	583		Change text to read "Tier 3 data could include country-specific emission factors based on permanent sampling plots data or models calibrated and validated with measurement data. Models could capture variation in emission rates driven by extent and depth of biomass extraction and in the case of water/sediment diversion, the rate of biomass decline. Field validations can be implemented to verify model output using " Most of the remaining text actually seems to be referring to the collection of activitiy data (ie identification and verification of the area impacts)		Accept
G_4_0083	Australia	4	572			Replace "should" with "could"		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0084	Japan	4	584	637		This “activity data” section provides some useful references which include data sources and relevant web site URL. However, more information is needed because data on coastal wetlands is very limited for most countries. It is recommended that some data samples should be provided in this section (samples of developing countries will be appreciated).		Accept
G_4_0085	USA	4	584			It would be helpful to expand some of this discussion on AD. I'm not sure it is particularly helpful for the inventory compiler--I think many would give up trying to get the activity data if they had to start such a broad search. Can you give more specific guidance?		Accept
G_4_0086	India	4	584	672	4.2.1.3	In the activities listed for activity data and emission factors in the Chapter 4 on Coastal wetlands, removal of firewood/wood has not been shown as a separate category though this is a significant activity contributing to emission from the mangrove forests in India and other tropical countries. Clubbing of this activity with other activities would not yield good estimates of GHG emission/removal. Emission factor in respects of fire wood/wood extraction from mangrove forests would be significantly different than extraction of other aquatic resources.		Accept with modification. These have been differenatiated with clearly link to 2006GL methodologies for wood removal

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0087	Australia	4	585	637		The choice of activity data does not recognise the practical limitations, including investment required, for inventory compilers to access complete activity data at a national scale and for the time-series. The lack of data is particularly problematic for seagrass and identifying areas effected by nutrient enrichment. Aerial photography is extremely expensive and as such it is going to be very difficult for countries to support this level of data collection. Not all countries are going to have comprehensive historic aerial photo records either, particularly for off-shore areas. While remote sensing imagery could provide some data there is still a signifcant cost associated with the purchase and processing of this data, and in many cases the data may not be available. Given the limitation on activity data, sections relating to sea grass should provide appropriate caveats - ie reporting should be limted to areas where sufficient activity data exist.		Accept.
G_4_0088	Australia	4	585	637		Where multiple management activities contribute to changes in carbon stock (for example nutrient enrichment, aquaculture, and hydrologic/sediment diversion may all occur within a defined area, and impact upon carbon stocks) how are changes in seagrass area identified through remote sensing going to be attributed to any one of these activities?		Accept.
G_4_0089	India	4	585	593	4.2.1.3	It may be good to stratify the coastal wetlands into : Natural, Plantations and according to age class.		Reject. Sufficient data are not available.
G_4_0090	USA	4	618	619		It is unclear what is meant by "coastal subsidence". Are you talking about relative sea-level rise or about land-surface subsidence due to drainage of organic soil wetlands and subsequent microbial oxidation of soils?		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0091	Canada	4	621	621		A footnote describing what constitutes rectilinear channel networks is suggested.		Accept with modification. This level of detail was deleted.
G_4_0092	USA	4	627	630		We don't understand the connection between using Approach 1 for land classification and the availability of info on drainage, and diversion projects. Explain why and possibly tell how Approach 2/3 may also be useful since most Annex 1 countries have some combination of Approach 1/2/3		Accept
G_4_0093	Australia	4	637	672		Tables 4.3, 4.4 4.5 and 4.9: these tables use the term Dry Weight. In the IPCC Guidelines the term Dry Matter is generally used. Suggest change to be consistent with other guidance. Tables 4.3 and 4.10 suggest the tables be moved closer to the methods or EF sections.		Accept.
G_4_0094	Chile	4	638	640		In Table 4.4, Aboveground Biomass in Mangrove Forests (tonnes DW.ha-1) is estimated as 196 tDW for Tropical Wet, 92 tDW for tropical Dry and 75 tDW for Subtropical Regions. In turn, Table 4.5, Aboveground Biomass Growth in Mangrove Forests (tonnes DW.ha-1 yr-1) is estimated as 9.9 tDW for Tropical Wet, 3.32 tDW for tropical Dry and 18.1 tDW for Subtropical Regions. If you apply the estimated Aboveground Biomass Growth in Mangrove Forests (tonnes DW.ha-1 yr-1) of Table 4.5 to divide the totals (tonnes DW.ha-1) of Table 4.4, the results are amazing, since you would need the following periods of time to reach the totals of Table 4.4: 20 years in Tropical wet; 28 years in Tropical dry and 4 years in Subtropical. This last brief period is difficult to understand.		Accept with modification. Tables were corrected where necessary

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0095	Chile	4	642	643		In Table 4.7 Wood Density (D) on Common Mangrove Tree Species, D of practically all species fluctuates between 0.45 t/m3 to 1.1 t/m3. However, Sommeratia alba shows a D of 0.08 t/m3 what is exaggeratedly low, even lower than Ochroma spp. (balsa wood). A very brief search in the web lead to an article by Akira Komiyama et al at the Journal of Tropical Ecology (2005) 21: 471-477, “Common allometric equations for estimating the tree weight in mangroves”, where in page 473, Table 3, Mean Wood Density assign a density of 0.475 t/m3 ± 0.047 to Sommeratia alba. It is recommended to check the D value for this species.		Accept with modification. Tables were corrected where necessary
G_4_0096	India	4	651	Table:4.8	4.2.1.3	AGB values for tidal marshes are so low in the range of 0.64 top 5.64 and the mean annual increment would be very low and not worth estimating.		Accept
G_4_0097	Australia	4	685	689		Given the level of uncertainty, there is a important question of whether there is sufficient data to support even a tier 1 method. In similar circumstances, for example the lack of sufficient geographic representation in the available data for Flooded Lands, a tier 1 method was rejected. Given the high level of uncertainty, and desirability of further research, guidance relating to these items should be moved to an annex, allowing countries to report this information on a voluntary basis, based on the level of information available and other national circumstances. Moving these items to an annex would appropriately reflect the status of scientific understanding on these issues.		Accept
G_4_0098	USA	4	698	699		The proportion of fw flow can also affect mangrove productivity.		Noted

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0099	USA	4	728	731		Is the assumption you are referring to that there is no change in DOM for the Tier 1? If so, we still think it would be useful to make that clearer here as many inventory compilers may not be familiar with this assumption--restating it would be useful		Accept
G_4_0100	Australia	4	736	737		Suggest remove "In Land remaining in a land-use category," and just start sentence with " Management activities.."		Accept.
G_4_0101	Japan	4	749	750		Table 4.12 [All activities in mangrove forest] It should be noted that, under the Stock-Difference method, countries must obtain DOM stocks data and some countries need to implement field survey. If default data is available, such countries can estimate carbon stock changes at reasonable cost.		Accept
G_4_0102	Canada	4	763	763		A footnote describing the Gain-Loss and Stock-Difference methods is suggested.		Reject. It was decided by authors not to limit to greatest extent possible the repetition of methods in 2006 GLs with references to the 2006GLs made instead in order to reduce duplication and keep text length to a minimum.
G_4_0103	Australia	4	776			What is tidal advection? Perhaps include term in glossary		Accept with modification. Deleted
G_4_0104	Australia	4	779	870		Replace "should"s with "could"s. Guidance should not use such prescriptive language for higher level methods which by nature are country specific.		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0105	USA	4	783			Typo, should be Snedaker.		Accept.
G_4_0106	USA	4	790			You say "emission factors" but we think you mean stock values. Seems like this should be in the AD section		Accept
G_4_0107	Australia	4	801			Change to "Tier 3 emission factors could be derived from process models calibrated and validated with measurement data or from sampling plots"		Accept.
G_4_0108	USA	4	807	809		This does not seem like sufficient guidance on the calculation steps.		Accept
G_4_0109	Canada	4	821	821		Soil oxidation should read "soil C oxidation"		Accept.
G_4_0110	Australia	4	823	824		As per previous comments remove reference to change in land-use conversion (see lines124, and 136). Suggest change text on these lines to read " ...effects on the soil carbon pools and CO2 emissions. Conversely,...."		Accept.
G_4_0111	Australia	4	827			Delete " Activities associated with either"		Accept.
G_4_0112	Spain	4	847	920		As the ecological functioning (biogeochemistry) of aquaculture ponds and salt production ponds is quite different, it could be interesting to recommend treating them separately where possible.		Noted

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0113	Australia	4	884	885		Not clear why during the abandonment phase soils emissions would be the same as for forest clearance? If there are on-going soils emissions associated with the initial clearing for contruction these should be included in the use phase as well. Also, to be consistent with other guidance, should these emissions not stop after 20 years. Can't keep losing soil C forever if there are no input sources.		Accept
G_4_0114	Australia	4	887	889		Check consistency with statement about tidal marshes and abandonment of SPs and the information provided in table 4.14.		Accept
G_4_0115	USA	4	899			insert "or removals" after "emissions"		Accept.
G_4_0116	Australia	4	904	920		Would be useful to give reference to the relevant tables for these parameters.		Accept
G_4_0117	Australia	4	942	953		Tier 2 country-specifc data is more than just information about the actual area and depth excavated but perhaps more importantly CS soil C loss EFs. Also replace 'should' with 'could' - a tier 2 could include some of the outlined improvements but should not have to included all of them.		Accept
G_4_0118	Australia	4	957	960		change to " Tier 3 methods could include use of process models to estimate CO2 emissions which are able to reflect impact of farming techniques, species farmed, stocking densities and feeding regimes, all of which affect Co2 emissions during use and likely abandonment phases. The effect of temperature and salininty on benthic metabolism both seasonally and with climate and ecological zone could also be included. Tier 3 ...."		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0119	USA	4	968			Change "4.54" to "4.15"		Accept.
G_4_0120	Australia	4	1002	1003		Should reference to table 4.17 actually be to table 4.18? There is a need to justify and further expand the assumption that the soil C losses associated with forest clearance and abandonment of AQ are the same.		Accept.
G_4_0121	Australia	4	1017			Replace "should" with "could"		Accept.
G_4_0122	USA	4	1021			insert "carbon" before "emissions"		Accept.
G_4_0123	Australia	4	1022	1024		This is inconsistent with table 4.14. Delete " mangrove forests and " and change second sentence to read " Note that data for mangrove forests and tidal marshes is insufficient to generate an emissions factor for nutrient enrichment."		Accept
G_4_0124	USA	4	1022			You say there is guidance for mangrove forests, but there are no default EF values in Table 4.19 for mangroves		Accept
G_4_0125	USA	4	1023	1024		You say there are EFs for mangrove forests, but you don't provide any values in Table 4.19		Accept
G_4_0126	Australia	4	1028	1029		Given that equation 2.6 is simply Emission = Activity x EF, it might be useful to just state that here rather than require user to look it up		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0127	Australia	4	1028	1029		Presume the activity data required for eq 2.6 is the area of seagrass lost ? It is not clear how this can be identified and attributed to nutrient enrichment where there are possibly mutiple management activities causing seagrass loss in a location.		Accept
G_4_0128	Australia	4	1047	1059		Should there be a time limit for these emissions? Should the method apply the 20 year rule ?		Accept with modification. Consistent with Chapter 2 for organic soils.
G_4_0129	USA	4	1059			It is unclear to me why only "partially drained" area is considered here. The EF seems to applied to "drained" not just partially drained. If it refers to whether a land use conversion has occurred this should be explained by this point and not wait until later.		Accept
G_4_0130	Australia	4	1065	1069		There are some concerns with this approach including: 1) Draining a wetland does not necessarily result in the complete removal of vegetation so why would we expect the entire soils C stock to oxidise over time. 2) even if this approach is applied, the default method does not give starting soils C stock so we don't know how many years to apply the EF for (need to specify a loss rate and a time frame over which soil C would change from reference level to modified level) 3) why would a new land use stop these emissions?		Reject. As soils just need to be oxidized.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0131	Australia	4	1090	1131		The proposed approach will create signficant difficulties for inventory compilers for two reasons 1) You cannot keep accumulating C forever, the soil C under restored or created wetlands will eventually reach an equilibrium. Need to set a time limit on this (eg 20 years). 2) Application of a 20 year delay before we estimate removals makes it extremely difficult for inventory compilers to keep track these lands. If we apply a 20 year rule to issue 1) above then inventory compiler need to be tracking and reporting emissions and removals from restoration and creation activities from the 1950s. Guidance should be modified so the method estimates the accumlation of soil C commencing with the restoration or creation activity and for a maximum of 20 years (or CS value if higher tiers are used). This change would also ensure consistency with other soil guidance.		Reject. 1) these types of soils vertically accumulate, thus do not reach equilibirum; 2) appication of the 20 yr is commonly used as a default
G_4_0132	China	4	1090	1093		“During this 20 year transient period it is assumed that soil emissions and removals are insignificant, so that rewetting of coastal wetlands results in a Tier 1 EF= 0.” Emissions differ in different phases in a transition period (e.g. the preceding 10 years and the ensuing 10 years). It is suggested that a transition period be divided into several phases, by which emissions are estimated and reported.		Accept with modificaiton. It is encouarged to be addressed at higher tiers.
G_4_0133	USA	4	1090	1093		We are wondering on what research these assumptions are based. Where are the references backing estimates for using an EF of 0 under these conditions?		Accept with modification. text clarified and some supporting data provided
G_4_0134	Australia	4	1097			change table 4.20 to 4.21		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0135	China	4	1127	1128		“During the transitional, rewetting period, the soil EF=0 regardless of the vegetation that is present. An EF=0 is applied until 20 years after vegetation re-establishment。” The same as above. It is suggested that a transition period be divided into several phases, by which emissions are estimated and reported.		Accept with modification. There is insufficient data available to justify differentiating phases. This can be applied in Tier 3 methods. However, the application of the EF is clarified.
G_4_0136	Australia	4	1135	1143		Change this section to reflect that the application of tier 2 and tier 3 methods needs to consider whether cs data are available or can be gathered at reasonable cost. The application of a higher tier should not immediately follow the determination that it is key, but should take into account availability of resources, state of research, and availability of data.		Accept
G_4_0137	USA	4	1144	1148		Including this type of generic guidance might bring up comparability issues across different country's inventories since not all countries would apply this guidance equally. Additionally, we do not understand how Table 4.13 provides the generic method. Need more explanation.		Accept
G_4_0138	Chile	4	1147	1148		“A generic method is provided in Table 4.13” for Other Activities. Perhaps the mention is to Table 4.14 (page 4.26) “Management Activities”, since Table 4.13 (page 4.24) provides Tier 1 Default Values for Litter and Death Wood Carbon Stockes.		Accept.
G_4_0139	Canada	4	1165	1177		The example box would be clearer if it explicitly labelled which tasks are under each of the steps listed above.		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0140	USA	4	1165			In the example provided of how to do a calculation, the example is very helpful. The only problem is we are still struggling to figure out where the numbers are coming from. Where are the tonnes of C that are included in the equation and one of the factors being multiplied, where are those numbers coming from? Since this is the only example that is worked out in the document, it would be very helpful if it could be made even more explicit which table each number is coming from so that the reader can figure out exactly how the calculation was made.		Accept
G_4_0141	Australia	4	1199	1200		should there be units on the salinity measures?		Reject. In the past, seawater salinity was measure based on the weight of total salts but the measurements are done using refractometer, so the unit is no more needed.
G_4_0142	Australia	4	1206			States here that only wetlands with salinity of <18 will generate CH4 emissions. Line 1199 states that polyhaline is >18 yet in table 4.24 and 4.25 it give EFs for oligohaline-polyhayline mangroves and tidal marshes. Request clarification.		Accept
G_4_0143	Chile	4	1213			“A generic method is provided in Table 4.13” for Other Activities. Perhaps the mention is to Table 4.14 (page 4.26) “Management Activities”, since Table 4.13 (page 4.24) provides Tier 1 Default Values for Litter and Death Wood Carbon Stockes.		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0144	USA	4	1215	1220		It would be helpful to describe the differences between direct and indirect emissions and avoiding double counting issues with indirect.		Accept
G_4_0145	Chile	4	1220	1220		“Table 4.21 presents the equations and emission factors for managed coastal wetland”. Perhaps the mention is to Table 4.22 in line 1225, since Table 4.21 in line 1132 refers to C emissions factors.		Accept.
G_4_0146	USA	4	1220			Do you mean Table 4.22?		Accept.
G_4_0147	USA	4	1238			Are there really no CH4 emissions from aquaculture ponds?		Accept with modification. This was deleted, there are no data on methane emissions from aquaculture
G_4_0148	USA	4	1245			Page 4.38, Equation 4.5: Please define "OR".		Accept.
G_4_0149	USA	4	1280			The equation should be provided even though it is very simple.		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0150	Australia	4	1286	1287		Clarification is requested on how practically the method for Ch4 from nutrient enrichment from agricultural run-off could be implemented in a national inventory. Guidance on getting activity data is to undertake a visual inspection of the maximum ingress of tidal water. It is highly inpractical for inventory compilers to undertake visual inspection of (up to thousands of kms) coastal wetlands, and the data may not be available from other sources. It is also unclear how to determine whether the wetland is actually being impacted by nutrient run-off or whether this is the intensive C and nutrient loading that may lead to a source of CH4 (line 1205). If it is not possible for countries to collect the data to implement this methods at a national scale, than it may be more appropriate for this information to be included in an annex, so that Parties can choose to voluntarily apply the methodology where sufficiently robust and consistent information is available.		Accept
G_4_0151	Australia	4	1314	1325		These dot point are not very clear. Is dot point (ii) not a consequence of dot point (i)? It may be possible to simplify and add "As a results the n2O EF is assumed to equal 0" to end of doint point (i) and delete dot point (ii). Not clear why a failure to reestablish veg would make the 0 assumption change. Dot point (iv) says must continue to report CH4 emissions forever so why specific 20 year transition period in point (iii). Suggest combining (iii) and (iv) . Perhaps you could also be more direct and say must continue to report the Ch4 emissions until restored or created wetland is drained. Presume this is what no longer being subject to a restored or created management activity means.		Accept
G_4_0152	Chile	4	1321	1322		“(iii) Once rewetting occurs, the EF for CH4 in Table 4.27 should be applied during 20 years transition period”. Table 4.27 is missing, and Table 4.26 could be quoted since it contains EF for CH4 for tier 1 of wetland rewetting and restoration.		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0153	Australia	4	1338	1340		Request clarification of these two sentences. Appears to be inconsistency betweensaying EF is 0, then refers to table 4.21 for Tier 1 EF, which is actually for CO2 emissions and then refers to eq 4.2.		Accept
G_4_0154	Australia	4	1362	1381		Would be more user friendly if the choice of activity data for each of the activities was included under the discussion of the methods for each activity		Accept
G_4_0155	Australia	4	1387	1436		Recommend that chapter be restructured to remove split into lands remaining and land coversion categories as this is confusing. If this change is made these sections could be deleted as they are presumably just summarising the methods already described under the current land remaining section. See further comments at line 124 and 136.		Accept
G_4_0156	Germany	4	1387	1388		4.3 has the same headline as 4.1.2 it would be preferable to add a qualifier to 4.2 like "emissions and removals from..."		Accept.
G_4_0157	India	4	1387		4.3	The title is confusing, "Conversion from a land use category that includes wetlands" the meaning of this is not clear.		Accept
G_4_0158	Germany	4	1389	1390		why is there a need for that chapter? Regardless in which LUC the respective land is categorised what trigger the emissions and removals are the management activities not the categories.		Reject. This is made available for extra guidance
G_4_0159	USA	4	1401			there are two "where" in this sentence and should be only one.		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0160	USA	4	1402			replace "where" with "on"		Accept.
G_4_0161	Germany	4	1410	1411		4.4 has the same headline as 4.1.3 it would be preferable to add a qualifier to 4.2 like "emissions and removals from..."		Accept.
G_4_0162	Germany	4	1410	1414		The headline uses the term LUC that could not only include coastal wetlands but FL, GL or others too. The first sentence narrows the LUC down to wetland only. It is preferable to use the term wetland also in the headline or vice versa.		Accept.
G_4_0163	India	4	1410	1411	4.4	The title is confusing, "Conversion from a land use category that includes wetlands" the meaning of this is not clear.		Accept
G_4_0164	USA	4	1444			What are organic and mineral soils on mineral soils?		Accept.
G_4_0165	USA	4	1485			Page 4.44, line 1485: Transparency is most important in order to ensure.		Accept.
G_4_0166	Canada	4	1524	1525		Who does "worker" refer to in this instance? A more appropriate term could be found.		Accept.
G_4_0167	USA	4	1524	1542		A fuller discussion of tidal exchange/hydrodynamics, with references included, would be helpful here.		Accept with modification. Povided in Future Methodological Development in Annex

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0168	Japan	4	1539			For example, Tokoro et al. (2013) empirically showed that seagrass meadows are functioned as a sink to neutral of overlying atmospheric CO2, by performing in situ measurements for the carbon flows, including the eddy-correlation technique, in both boreal and subtropical seagrass systems. The key factor determining whether coastal ecosystems directly reduce atmospheric CO2 may be the balance of the net ecosystem production in the waters and the carbon input from land (Tokoro et al., 2013). Tokoro, T., Hosokawa, S., Miyoshi, E., Montani, S., Kayanne, H., and Kuwae, T. (2013): Field measurements and analyses of coastal Blue Carbon and atmospheric CO2 sequestration. Report of Port and Airport Research Institute 52(1): 3-49. Available at http://www.pari.go.jp/search-pdf/vol052-no01.pdf Accepted: November 18, 2012		Accept
G_4_0169	Chile	4	1546			In Refferences, there is a blend of "and" and Ampersand (&) in these cites.		Accept.
G_4_0170	Chile	4	1644			In this citation there is not an "and", nor an &		Accept.
G_4_0171	Chile	4	2576	2577		It says that “D = tree diameter and DBH = diameter-at-breast-height”. The most common measure of living steam tree diameter is DBH. For greater clarity, it could be considered to explain whether D is measured: at the half of the steam length, if it is the average between the steam bigger and smaller diameter, or there is another explanation.		Accept with modification. Clarified and covention in 2006GLs followed.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0172	Australia	4	Box 4.1			This box appears out of context here. It is currently referenced in section on "identification of ecosystem types". This is not what this box is discussing. A discussion of the complexity of land use classifications and this box would be better included in the introduction (see comment on lines 136-146)		Accept.
G_4_0173	Australia	4	Figure 4.1			There are some concerns with this flow diagram as it fails to reconise the EF data required to conduct Tier 2 or 3 analysis. Detailed information on management activities does not equate to having country specific information on biomass/soil C stocks and other parameters needed to estimate emissions (the EF data) using Tier 2 or 3 methods. Collecting both the management activity and "EF" data are likely to require significant resources and will not always be available to a country. This flow diagram needs to explicitly recognise the EF data component, as is done in other 2006 GL flow diagrams. At a minimum this should be done as a footnote (see Vol 4 Figure 2.2 for an example).		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0174	Finland	4	General			This chapter deals with coastal wetlands and specific activities that impact GHG emissions from these lands. The guidance is new and in our view it would need significant improvements before it could be used in annual inventory preparation. The guidance addresses several different activities taking place in the coastal wetlands, lumping the guidance together in a way which is not always justified. The guidance would need to be developed separately for the activities/source categories. Also, the link with human activity and its impact on the emissions is not clear. e.g. the default EFs given for nutrient enrichment are not linked with the the nutrient load or the source of the nutrients. The structure of the chapter is confusing, what is meaning of sections 4.1.2 and 4.1.3, and 4.3 and 4.4 - how do this link to 4.2. Some emission factors are often given based on one reference - is this sufficient? What is the representatives of the defaults, especially as no difference is made by climate region? The sections on choice of activity data are also insuffient in giving guidance where and how to obtain the data for the calcualtions, the guidance is also sometimes unrealistic ("inspection of the total areas where biomass is removed", "to estimate CH4 emissions, the area receiving agricultural runoff must be determined by visual inspection of the maximum ingress of tidal waters within the wetland" (Tier 1 guidance), etc.). Therefore we suggest that the chapter is included in an apprendix for future methodological development.		Accept
G_4_0175	Spain	4	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 prerrogative of the country to subdivide a land use category. It should be said that the areas could be stratified.		Accept
G_4_0176	USA	4	general			Very well done!		Noted

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0177	USA	4	general			Perhaps some mention of the labile and non-labile fractions of coarse woody debris (CWD) contributing to DOM in mangrove forests would be useful. The labile fraction of fresh CWD will contribute to CO2 emissions much sooner (within 1-2 years) compared to the non-labile fraction (lifetime of decades). Regarding Tables 4.15 to 4.18, differentiating pulse-type emissions from those that result in continuous increased emissions is an important one and is clearly identified in the text. Overall, this chapter effectively summarizes the state of the science in quantifying C dynamics and emissions from a complex set of coastal ecosystems, including sea grasses, mangrove forests, and fresh and saltwater marshes. The authors do a good job in building a common framework for this set of ecosystems that may have very different functional properties. Section 4.6.1 (Carbon export) demonstrates the large gap in knowledge in understanding C dynamics in these systems. The need to further develop technologies to quantify net C export is stressed in this section. The text could take one addition step to stress the need for clearly defining what is meant by "the system". For instance, if a particular mangrove forest is a known C source to the estuary, do we necessarily need to measure that flux? Or, is it more important to quantify C losses (or C accumulation) and to assess net export of all C streams (DIC, DOC, POC) by difference through closure of the carbon budget defined by Chapin et al. (2006)? [Chapin, F. S., et al. 2006. Reconciling carbon-cycle concepts, terminology, and methods, Ecosystems, 9, 1041,Äì1050, doi:10.1007/s10021-005-0105-7]		Accept with modification. Thank you for this comment. Unfortunately, there are not sufficient data to address these elements in the guidance and these are addressed to the extent possible in Future Methodological Development section

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0178	Australia	4	General		general	We are very concerned that this chapter is not ready for finalisation. We have concerns with the lack of clarity surrounding the land classification systems; lack of clarity about the role of management activiities which have the potential to limit the scope of monitoring, but this is not clear; absence of systematic national monitoring systems for the collection of activity data. We have concerns that the proposal to extend the coverage of the system to vegetation under the sea has both international treaty and national sovereignty complexities, which have not been addressed. For these reasons, this chapter should be placed in an annex. Finally, we do not believe that the SBSTA mandate extended to addressing vegetation under the sea. The IPCC should be free to develop guidance as it sees fit, of course, but it could be argued that the sections on vegetation under the sea should be deleted - otherwise there is a risk that the SBSTA will not see the Volume as assisting it in its task.		Accept with modification. The land classification issues have been addressed by clarifying how to treat management activities in coastal wetlands. The guidance on some activities were deleted when available activity data could not easily be obtained. The guidance is robust and was written for clarity and ease of use by inventory compilers.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0179	Australia	4	General		general	This chapter appears to extend beyond the scope intended by the SBSTA, and fails to recognise the limitations of science and data, specifically in relation to seagrass meadows and CH4 emissions from nutrient enrichment. Guidance relating to these items should be moved to an annex, allowing countries to report this information on a voluntary basis, based on the level of data available and other national circumstances. Moving these items to an annex would appropriately reflect the status of knowledge on these issues and the capacity of countries to access the data needed to implement the methods. The IPCC must also be cognisant that consideration of issues which extend far beyond the land sector and into marine environments raises complex issues regarding national sovereignty and responsibility for natural resources and GHG emissions within the marine environment. For example, sea grass meadows which occur at a depth of 40 metres may often occur beyond a countries territorial sea, which could raise questions that must be considered in light of international agreements, including the UN Convention on the Law of the Sea. While important areas for consideration, these issues should more properly be given their place within the marine environment, not within the land sector, so as to avoid introducing new and unnecessary complexities into reporting of land sector emissions. It is therefore advised that the sections relating to seagrass either be appropriately limited to take into account national circumstances, or removed from this supplement.		Accept with modification. The land classification issues have been addressed by clarifying how to treat management activities in coastal wetlands. The guidance on some activities were deleted when available activity data could not easily be obtained. The guidance is robust and was written for clarity and ease of use by inventory compilers.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0180	Australia	4	General		general	The chapter should commence by emphasising the role of country-specific definitions of wetlands. This definition should be reconsidered and applied to take into account country's national circumstances, and to be consistent with existing international Conventions, including the Ramsar Convention. Proposed redrafting: "Coastal wetlands are wetlands at or near the coast that are influenced by saline or brackish water and/or astronomic tides. Countries should document how the definition of coastal wetlands will be applied to their national circumstances, including the seaward limit of coastal wetlands. Coastal wetlands may occur on both organic and mineral soils. Brackish/saline water is water that contains 5000 or more parts per million (PPM) of dissolved salts. 'Inland wetlands' are not 'coastal'. "		Accept
G_4_0181	Australia	4	General		general	It may be useful for this chapter make some discussion of natural disturbances and how these impacts should be reported. Cyclones and other storms can presumably have significant impacts on managed coastal wetlands (eg through destruction of vegetation and coastline erosion) and these will be picked up is data is collected through remote sensing.		Accept
G_4_0182	Australia	4	Table 4.1			Suggest you rename table " Management activities in coastal wetland ecosystems which can have signficant impacts on emissions and removals" and remove land-use category sections (see further comments at line 124 and 136).		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0183	USA	4	Table 4.1			In the second cell from the top, it states that 'This section covers management activities that occur in coastal wetland ecosystems and that may or many not result in a conversion to another land-use category." But if the land is converted to another land use category, then how could it be covered in this section on "Land remaining in a land use category", which is what you have put in ALL CAPS in this cell. In fact the the division proposed in this chapter section with three land use/conversion categories does not seem consistent with the IPCC approach, or at best is confusing.		Accept
G_4_0184	USA	4	Table 4.1			In the first diamond, what does the superscript by "information" refer to?		Accept.
G_4_0185	USA	4	Table 4.11			Provide units for "R"		Reject. Non-dimensional and convention in 2006GLs followed.
G_4_0186	USA	4	Table 4.11			Why not use the same units as in Table 4.3, Vol 4, Chapter 4 of 2006 GLs		Accept.
G_4_0187	USA	4	Table 4.12			This table comprises the heart of the methodological guidance and to be useful it needs further elaboration (a cookbook approach is recommended) in order to guide the inventory compiler through these complex methods. Condensing the bulk of the guidance into this small table seems a far too abbreviated of a description.		Accept
G_4_0188	Australia	4	Table 4.14			Section 4.2.3, including table 4.14, assumes an ability to attribute change in soil carbon pools to specific management practices. For seagrass, this may not always be possible, and will be limited by the availability of activity data.		Accept with modification. Sources of activity data provided and focused to just a few most important activities

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0189	USA	4	Table 4.15 and 4.16			Both of these tables are for construction and extraction. We don't understand how the inventory compiler knows which table to use. The values are very different and no climate or ecosystem distinctions are made between the two tables that would guide the inventory compiler in which values to use from each table.		Accept
G_4_0190	India	4	Table 4.2		4.2.1	Tidal Marsh and seagrass meadow: Is it necessary to estimate biomass since there will be no perennial trees in seagrass meadows.		Accept with modification. Clarfied as perennial woody
G_4_0191	Australia	4	Table 4.2			AQ,SP and EXT-D at start of activity Mangrove forests - . 1) Would any growth of biomass be expected during the construction phase? If not the reader should not be directed to equations 2.9-2.10. 2) Would the calculation of the changes in biomass during this phase be better described by the "land coversion" equations 2.15 and 2.16. If you remove the land remaining and land coversion split to this chapter it may be better to direct users to this equation noting that may not consistute a land use change.		Accept
G_4_0192	Australia	4	Table 4.2			AQ, SP : for use phase . If we have assumed that all biomass is removed during construction phase it is not clear what we are estimating here. Would not expect a great deal of biomass regrowth or futher biomass loss during the use phase?		Accept with modification. This is was clarified and encouraged to be addressed at higher Tiers.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0193	USA	4	Table 4.2			We don't think this table constitutes the type of "cookbook" guidance that is necessary for the inventory compiler and consistent with the type of guidance in the 2006 IPCC Guidelines. I'm sure it probably does contain the basic guidance necessary to estimate the biomass changes, but it is not clear and transparent and does not meet the "cookbook" standard. This table seems to be the heart of the methodological guidance for biomass and we think it needs more elaboration to be good guidance for the inventory. This shorthand approach to explaining the method is not as helpful. Additionally, in the cell explaining the method for AQ, SP, EXT-D for Mangrove forest, we don't understand why you say to apply Eq. 2.9 ot 2.10. Eq. 2.9 estimates the annual increase in biomass and 2.10 is provided to estimate the GTotal factor in Eq. 2.9. Shouldn't you use Eq. 2.7 to estimate the change in stocks and then a combination of 2.9-2.14 to estimate the gains and losses that will be used in Eq 2.7 to estimate the biomass change.		Accept
G_4_0194	USA	4	Table 4.2			Drexler et al. (2009) provide important estimates for carbon losses from organic, fw tidal marsh soils due to drainage for agriculture. (Drexler, J.Z., de Fontaine, C.S., and Deverel, S.J. 2009. The legacy of wetland drainage on the remaining peat in the Sacramento-San Joaquin Delta, CA, USA. Wetlands 29: 372,Äì386).		Accept with modification. Included in Hatala et al 2012
G_4_0195	Australia	4	table 4.22			Restoration and Creation: Mangroves - should the CH4 EF = 0. This is what text on line 1338 and table 4.26 state.		Accept
G_4_0196	USA	4	Table 4.23			It would be helpful to clearly indicate which value is EFf and which is EFi to avoid any confusion		Accept

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0197	USA	4	Table 4.26			In the title you specify "unmanaged coastal wetlands". We don't understand that, do you mean "managed"		Accept with modification. This text was revised to clarify that is meant.
G_4_0198	USA	4	Table 4.26			We think instead it needs to be stated that at salinities of < 18 ppt, the methane emissions are highly variable from marshes and difficult to predict. Further research is needed.		Accept with modification. Text provided to clarify. Higher tiers should be implemented if this contributes to a key category and work to be done to address this variability.
G_4_0199	USA	4	Table 4.3			Why not combine leaves and wood into a single value. It would be more consistent with aboveground forest biomass estimates from other land uses e.g., Table 4.7 in Volume 4, Chapter 4 of the 2006GLs		Accept
G_4_0200	USA	4	Table 4.3			The units are confusing in this table. So the carbon content is in g C per 100 g DW or % DW for Table 4.3.		Accept.
G_4_0201	India	4	Table 4.4	Table 4.4	4.2.1.3	Above ground biomass mean value of 196 Dt for tropical wet mangroves is an abnormal value and evenb the range of 3.7 to 557 Dt also seems abnormal. If someone uses the tier 1 method and uses value of 196 Dt/Ha, the total standing biomass for the country will be abnormally high. One study may have given the value of 557 Dt, it is suggested to exclude extreme values to get a reasonable average AGB.		Reject. The means were recalculated and they are correct. Indian biomass is smaller.
G_4_0202	USA	4	Table 4.4			Is the "DW" abbreviation the same as dry matter as used in Table 4.7, Volume 4, Chapter 4, of the 2006 GLs		Accept.

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ID	Government	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action & Note
G_4_0203	USA	4	Table 4.4			The units are confusing in this table. In Table 4.4, the units are (metric) tonnes DW/ha-1. Is this tonnes DW of carbon or just organic material??		Accept.
G_4_0204	Australia	4	Table 4.4, 4.5, 4.6			Mangrove forests may be found at higher latitudes [38 degrees south] under temperate environments, requiring further guidance and updates to these tables.		Reject. Not a significant area to justify disaggregation
G_4_0205	India	4	Table 4.5	Table: 4.5	4.2.1.3	AGB biomass growth rate of 9.9. tonnes is also very high, it is suggested to exclude extreme growth rate values.		Reject. The means were recalculated and they are correct. Indian biomass is smaller.
G_4_0206	USA	4	Table 4.6			Provide units for "R"		Reject. Non-dimensional and convention in 2006GLs followed.
G_4_0207	USA	4	Table 4.7			What are the units of wood density here?		Accept.
G_4_0208	USA	4	Table 4.8			Why not include some species specific data here as there are great expanses of marsh with species such as Phragmites australis or Spartina alterniflora?		Reject. Beyond scope, non-woody biomass removed, and species specific data would not cover many other regions
G_4_0209	India	4	Table 4.9	Table 4.9	4.2.1.3	AGB values given for table 4.9 are they perennial tree biomass or grass biomass? If it is grass biomass, should one estimate the carbon stock at all?		Reject. These are seagrass values and labeled as such