

<Review comments on First Order Draft of Chapter 6 of Wetlands Supplement>

ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60001	Thompson, Victoria	6	1	1	6	When "tier" appears by itself, i.e. not in context of "Tier 1" or "Tier 3", should it be capitalized or lowercase? This is not consistent throughout.		Rejected	We checked 2006GLs and followed its manner. Then we did not change the upper or lower case letters.
60002	Thompson, Victoria	6	1	1	6	Italicize 2006 IPCC Guidelines and Wetlands Supplement throughout		Accepted with modifications	We made 2006 IPCC Guidelines italic. We did not change the words "Wetlands Supplement", and TSU will suggest for it because it is relevant to other chapters.
60003	Thompson, Victoria	6	1	1	6	greenhouse gas should not be abbreviated as GHG throughout		Accepted	
60004	Thompson, Victoria	6	1	1	6	Spell out "Figure", "Table" and "Equation" throughout (do not abbreviate as "Fig.", "Tab.", "Eq.")		Accepted	
60005	Thompson, Victoria	6	1	1	6	hyphenate "country-specific" wherever it occurs--often is given incorrectly as "country specific"		Accepted	
60006	Sharma, Chhemendra	6	2	2		The chapter title may be changed to "constructed wetland for waste water treatment" for more clarity and avoiding confusion with other types of constructed wetlands like "dams" etc.		Accepted	
60007	Wirth, Tom	6	2	2	6	It may help to rename the chapter "Constructed Wetlands for Wastewater Treatment" so it is clear that it doesn't include aquaculture ponds or other constructed wetlands.		Accepted	
60008	Rock, Joachim	6	5	23	6	Please expand page numbers and include chapter number therein.		Accepted	

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60009	Garcia-Apaza, Emilio	6	50	65	6	In terms of constructed wetlands, in Bolivia we have lot of kind of constructed wetlands since the adaptation processes: i.e. small dams, sukakollus, camellones, atajados (like small reservoir blocked water), kochas (artificial surface water stored in a small pit), shallow wells, australian tanks type for surface water, most of them construted on clay soils, which could produce kind of seasonal emissions since its anaerobic periodic system. That's why we consider that this Chapter should include not only the wastewater treatment, which also could lead kind of confusion with the Waste Sector. Perhaps also introducing kind of clarification saying that it is for water biorremediation treatment.		Rejected	This chapter is for wastewater treatment by CWs and do not cover that one.
60010	Guendehou, Sabin	6	50	59	6	I don't see the relevance of these sections. I would suggest to delete them. Instead recall the definition of wetlands (as in the 2006 IPCC Guidelines), add that of constructed wetlands and indicate that guidance is provided in this chapter to distinguish constructed wetland and to report CO ₂ , CH ₄ , and N ₂ O emissions occuring in these systems.		Accepted with modifications	The definition of wetlands is necessary to provide the foundation link to other chapters as well as clear understanding of the constructed wetlands served as wastewater treatment. Nevertheless we have revised wording to be more apporprate.
60011	Hopfensperger, Kristine	6	51	51	6	The word "lead" should be "led"		Accepted	Corrected as indicated.
60012	Jacques, Kouazounde Bamikole	6	51	52		The sentence is an extract from work of Brix (1997). Please, insert the reference.		Accepted	The article was listed as indicated.
60013	Chen, Gaungcheng	6	52		6	water quality 'improvement'?		Accepted	Corrected as indicated.
60014	Penman, Jim	6	53	59		Are natural wetlands used in this way covered anywhere? Should they be?		Accepted	Natural wetland in not consider in this chapter but semi natural wetland that act as WWT is covered.

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60015	Chen, Gaungcheng	6	54		6	wetlands are not only terrestrial sink but also marine sink for carbon (e.g. Mcleod et al., 2011 in Front Ecol Environ).		Accepted with modifications	Agree but we removed that sentence out in order to make the text more specific. This will be cover in Chapter 4.
60016	Lund, Herluf Gyde	6	65	65	6	Vymazal, 2007 not in references, but there is a 2001 listing. See line 687.		Accepted	That article was added to the reference list.
60017	Thompson, Victoria	6	68	68	6	quality of WATER POLLUTED WITH point and nonpoint sources of water pollution		Accepted	Corrected as indicated.
60018	Chen, Gaungcheng	6	71		6	'aquaculture ponds' is better than 'fish pond' here as there is also shrimp pond discharge.		Accepted	Change to aquaculture
60019	Yamada, Masato	6	76		6	Can "oxidation pond" or "lagoon" be included in the constructed wetland, especially in tropical countries? Because some ponds looks like A) and B) of Fig. 6.2 with vegetation. Each name is different but both functions are almost same. Then what is difference between pond and constructed wetland? Please clarify.		Rejected	Ponds and lagoons are different from CWs. Oxidation ponds and lagoons are deeper than CWs with different structure and activities and not classified as constructed wetland. Hence oxidation pond and lagoon are not considered in this chapter.
60020	Lund, Herluf Gyde	6	79	83	6	Vymazal 2007, 2011 - not listed in references.		Accepted	That articles were added to the reference list.
60021	Yamada, Masato	6	79		6	Numbers of Fig. are shifted one by one.		Accepted	We checked and revised it.
60022	Lund, Herluf Gyde	6	84	85	6	It is nice to see some color in this supplement. Consider doing same for other chapters.		Accepted	
60023	Jacques, Kouazounde Bamikole	6	87	88		Figure 6.2. C): please, annotate the part 1, 2, 3, 4, 5 , 6, 7, 8 of this figure		Accepted with modifications	Figures 6.1 and 6.2 were reconstructed and merged.
60024	Gao, Qingxian	6	87	133	6	Figure 6.2 shows the "the constructed wetlands for wastewater treatment", it was divided 4 types, FFP,FWS, HSSF and VSSF, but from line 92 to 133, the explanation for CW is different with figure 6.2, is different structure.		Accepted with modifications	Figures 6.1 and 6.2 were revised and merged to avoid inconsistency

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60025	Gao, Qingxian	6	87	91	6	In figure 6.2 note: "constructed wetland with horizontal sub-surface flow (HSSF, HF)" and "constructed wetland with vertical sub-surface flow (VSSF, VF)", is this means in this report "VSSF = VF" and "HSSF = HF" ?		Accepted with modifications	Figures 6.1 and 6.2 were reconstructed and merged for clear understanding.
60026	Gao, Qingxian	6	92	99	6	The notation key is suggested to be more organized. For example, CW means "constructes wetlands", it should be used in the very beginning of this report. The notation key in the whole report is suggested to reorganized.		Accepted	
60027	Lund, Herluf Gyde	6	94	98	6	(Kadlec and Wallace 2008) not listed in references - but there is one for 2009. See line 612..		Accepted	It's just typo. 2009 changed to 2008 and listed in references.
60028	Lund, Herluf Gyde	6	96	96	6	Crites et al 2005- not listed in references.		Accepted	That article was added to the reference list.
60029	Thompson, Victoria	6	96	96	6	plug-flow conditions should be defined		Rejected.	"Plug-flow" is a simple model of velocity profile of a fluid flow in a pipe. We do not add definition because this is common term but we revised text for clearer understanding .
60030	Yamada, Masato	6	101		6	Which is abbreviation for The horizontal subsurface flow constructed wetlands, HF CWs or HSSF CWs?		Accepted	We use "HSSF" only.
60031	Lund, Herluf Gyde	6	106	106	6	Brix 1987 not in references, but there is one for 1997. See line 590		Accepted	Brix 1987 was added to the reference list.
60032	Lund, Herluf Gyde	6	108	110	6	Vymazal and Kröpfelova 2008 - not in references.		Accepted	That article was added to the reference list.
60033	Lund, Herluf Gyde	6	108	108	6	Vymazal and Kröpfelova 2008 not listed in references.		Accepted	That article was added to the reference list.

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60034	Thompson, Victoria	6	111	112	6	Unclear if all HF are capable of operation under colder conditions (because all HF have the ability to insulate the surface of the bed), or if only some HF have the ability to insulate the surface of the bed and therefore only these HF are capable of operation under colder conditions		Accepted	The text has been modified
60035	Yamada, Masato	6	114		6	Which is abbreviation for The horizontal subsurface flow constructed wetlands, VF CWs or VSSF CWs?		Accepted	We use only "VSSF".
60036	Penman, Jim	6	115	117		is this what was intended? "In contrast with HF CWs, VF CWs are fed with large intermittent wastewater flows, which flood the surface of the bed, then percolate down through the bed and is collected by a drainage network at the bottom. "		Accepted	
60037	Lund, Herluf Gyde	6	118	118	6	Cooper 2005 not in references		Accepted	That article was added to the reference list.
60038	Thompson, Victoria	6	119	119	6	insert comma after "forms", insert "then" after "which"		Accepted	
60039	Guendehou, Sabin	6	136	164	6	I don't see the relevance of this section, otherwise shorten: it is not clear, what data in Table 6.2 is for, Table 6.1 can be deleted. Some sentences make reference to specific studies (for e.g. line 143-146).		Rejected	Table 6.2 is directly connected to EF. Table 6.1 is informative for inventory compilers.
60040	Jacques, Kouazounde Bamikole	6	136	141		please, recall the mechanism of production CH ₄ and N ₂ O		Accepted	Additional explanation is provided.
60041	Chen, Gaungcheng	6	137		6	'importance' here is inappositely used. The greenhouse gases are not important! I guess the author meant that the role of the two GHGs receives more attention recently.		Accepted	Revised text have been done in the text. Sentence changed to focused on CWs.
60042	Evrendilek, Faith	6	137	137	6	wetlands "whose" importance has		Accepted with modifications	We revised as follows. "constructed wetlands, the importance of which has been increasing recently."

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60043	Thompson, Victoria	6	137	137	6	wetlands WHOSE importance		Accepted with modifications	We revised as follows. "constructed wetlands, the importance of which has been increasing recently."
60044	Thompson, Victoria	6	138	138	6	depend, not depends		Accepted	
60045	Evrendilek, Faith	6	140	140	6	play"s"		Rejected	In this sentence, we want to say that many factors play a role as shown in table 6.1". So, we decided to keet it.
60046	Thompson, Victoria	6	140	140	6	delete space between close parenthesis and comma		Accepted	
60047	Hopfensperger, Kristine	6	141	141	6	Table 6.1: It is stated that plants would lead to an increase in CH4 emissions; however, if plants have high amount of aerenchymous tissue and are delivering oxygen to the rhizosphere thereby aerating the soil, then CH4 emissions would be reduced. I understand plant OM could provide substrate to increase CH4 emissions, but how do you know the balance of these two effects would be a net increase?		Accepted	As you indicated, aerenchymal plants supply oxygen to the rhizosphere. But the aerenchyma also provides pahtway of gases emission. Then, we summarized as table 6.1.
60048	Evrendilek, Faith	6	143	143	6	conversion "rates" derived from literature-based relationships		Accepted	
60049	Thompson, Victoria	6	143	143	6	conversion rateS derived from THE literature-based...		Accepted	
60050	Evrendilek, Faith	6	144	144	6	loading"s"		Accepted	
60051	Thompson, Victoria	6	144	144	6	emissions in THE main types		Accepted	
60052	Yamada, Masato	6	144		6	If no correlation was found for HSSF types, conversion rates for "FWS and VSSF" and "HSSF" were not comparable in Table 6.2 only with standard error. Please show other stastical parameters to show relaiablity of values "in the table".		Accepted	Additional statistical parameters have been provided in table 6.2.

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60053	Thompson, Victoria	6	147	150	6	Also, THE limited AVAILABLE data did not allow derivation OF reliable relationshipS...used as A base for calculation of emisSion factors for Tier 1 and Tier 2 METHODOLOGIES. THE high emission...accumulated AT the bottom.		Accepted	
60054	Eve, Marlen D	6	148	148	6	edit sentence for clarity: "allow derive"?		Accepted	This sentence was revised as "allow derivation of reliable relationships".
60055	Evrendilek, Faith	6	149	149	6	as "the" base for "the" calculation		Accepted with modification	Based on this comment and the other comment, we corrected the phrase as follows: "as a base for the calculation"
60056	Penman, Jim	6	149			Where did the HSSF values come from if no correlation was found?		Accepted	We took the conservative approach using the highest value reported.
60057	Evrendilek, Faith	6	151	151	6	wetlands .Delete the space before the period.		Accepted	
60058	Evrendilek, Faith	6	151	151	6	emission"s"		Accepted with modification	This sentence was deleted.
60059	Thompson, Victoria	6	151	151	6	delete space between "wetlands" and period. Insert "and" after "CH4 and N2O"		Accepted with modification	This sentence was deleted.
60060	Evrendilek, Faith	6	152	152	6	"and other environmental factors"		Accepted with modification	This sentence was deleted.
60061	Kantawanichkul, Suwasa	6	152	152	6	The sentence in this line does not make any sence with the line 151.		Accepted with modification	This sentence was deleted.

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60062	Gao, Qingxian	6	152	153	6	In table 6.2 there are 3 types of CW, but in figure 6.2 there are 4 types, why the FFP type is missing?		Accepted	Figures 6.1 and 6.2 were reconstructed and merged. Then, we hope this will help your understanding.
60063	Chen, Gaungcheng	6	155	164	6	<p>In Table 6.1, the author concluded no clear relationship was found between temperature and N₂O emission. In the following paragraph, two references (Sovik et al., 2006 and Yu et al., 2011) were cited to support this conclusion.</p> <p>The GHGs emissions from constructed wetlands are affected by several factors, such as water level, TOC, nutrient loading, plant species and cover (Inamori et al., 2008 in Chemosphere), among which temperature is also an important factor regulating the gas production and emission from wetlands as it control the biological processes in soil. A large number of studies have showed that the N₂O flux from CWs was influenced by temperature and showed seasonal/temporal variation (e.g. Fey et al., 1999 in Bio Fertil Soils; Johansson et al., 2003 in Tellus; Inamori et al., 2008). Thought VSFF CWs in Europe had both high N₂O fluxes in summer and winter, but sØvik et al. (2006) concluded that the emissions of N₂O from CWs were significantly higher during summer than during winter, indicating an positive effect of temperature. Such an effect of temperature on N₂O production/emission is also demonstrated by plenty of laboratory/field studies in natural wetlands (e.g. Kieskamp et al., 1991 in MEPS; Mu et al., 2009 in Chinese Journal of Plant Ecology). Though increased soil emissions of CO₂ and N₂O as well as soluble nutrients have been reported after freeze-thaw process, Yu et al. (2011) explained this as the result of release from microbial biomass, root turnover and change in soil structure caused by free-thaw cycles rather than the decrease in temperature. The release of DOC caused by freeze-thaw cycles might also play an important role in the burst of N₂O emissions. Increase of N₂O emission was observed after thaw, which is a process of increasing (no decreasing) temperature compared to the freezing. Base on these considerations, I don't think it is compellent to conclude that there is no relationship between N₂O emission and temperature based on limited (2) studies in template/frigid zones. The authors should improve the method with temperature taken into account, by expanding the source of literature.</p>		Rejected	Current literature showed the effects of temperature on N ₂ O emission although mecanisms are complicated. According to our literature-based analysis, to this extent, no clear general relationship was found.
60064	Chen, Gaungcheng	6	155	164	6	move this paragraph before Table 6.1		Accepted with modifications	We decided to move this paragraph to just below Table 6.1

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60065	Penman, Jim	6	155			Does this mean the temperature of the air in the soil, or the temperatures of the air and the soil?		Accepted	The "air" is deleted.
60066	Penman, Jim	6	155	164		We seem to be reverting to a science discussion after having reached a methodological conclusion. Suggest re-order text.		Accepted	That sentence is moved.
60067	Yamada, Masato	6	155		6	In discussions about affecting factors affecting emissions, effects of oxygen (or air supply) should be described. This is nesseray to understand meaning of MCF in later.		Accepted with modifications	Oxidation reduction potential was added to the text as a factor. Methane oxidation is described in next sentence.
60068	Lund, Herluf Gyde	6	156	156	6	Van der Zaag 2010 - not listed in references. Should Van der be Vander as on line 682?		Accepted	
60069	Thompson, Victoria	6	156	156	6	affecting emissionS		Accepted	
60070	Thompson, Victoria	6	157	157	6	show that A water table deeper		Accepted	
60071	Thompson, Victoria	6	158	158	6	do not show A clear		Accepted	
60072	Evrendilek, Faith	6	159	159	6	"have"		Accepted	
60073	Thompson, Victoria	6	159	159	6	insert comma after soil/air temperature. "have been" not "has been"		Accepted	
60074	Lund, Herluf Gyde	6	161	162	6	Altor and Mitsch (2008) Not listed in references.		Accepted	That article was added to the reference list.
60075	Evrendilek, Faith	6	163	163	6	"decrease"		Accepted	
60076	Thompson, Victoria	6	163	163	6	decrease, not decreases		Accepted	

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60077	Thompson, Victoria	6	164	164	6	N2O emissionS, in contraST, DO not show		Accepted	
60078	Evrendilek, Faith	6	166	166	6	The following is not in the same format as with the rest: WASTEWATER TREATMENT AND DISCHARGE		Rejected	This is chapter title of 2006 Guidelines and not our supplement chapter title.
60079	Thompson, Victoria	6	166	166	6	Title of chapter should not be all caps		Rejected	This is chapter title of 2006 Guidelines and not our supplement chapter title.
60080	Thompson, Victoria	6	166	169	6	What is the "new section" referred to in line 167? How does it relate to the Wetlands Supplement? Does "this section" in line 168 refer to the same section, or to the current section in the Wetlands Supplement?		Accepted	This means a section of 2006 Guidelines. We deleted 'new'.
60081	Thompson, Victoria	6	167	167	6	in "The IPCC Guidelines", "The" should not be italicized. And change to "2006 IPCC Guidelines"		Accepted	
60082	Thompson, Victoria	6	169	169	6	This Wetlands Supplement, not This Supplement on Wetland		Accepted	
60083	Thompson, Victoria	6	171	172	6	FROM constructed wetlands...are the same as THOSE TREATING domestic wastewater.		Accepted	
60084	Chen, Gaungcheng	6	172	173	6	This chapter excludes CO2 emission from CWs as the authors considered CO2 from wastewater are biogenic. However, CO2 emissions from CWs are not so simple, including CO2 emission from wastewater, emission from soil (HSSF and VSSF) and emission due to change in plant biomass. I suggest the authors considering the process of C exchange between wetlands and atmosphere, and improve the method.		Rejected	Carbon balance in CWs is so complicated as you indicated. We think there are not enough information. This chapter does not cover C sequestration in the wetlands.

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60085	Eve, Marlen D	6	175	175	6	Figure 6.3. This figure is very helpful in clarifying relationship between this document and IPCC 2006. A similar graphic would be useful to include for other sections and other chapters to help the reader identify the relationship between the current wetland guidance and the 2006 guidance.		Accepted	We will give this suggestion to other chapters.
60086	Thompson, Victoria	6	182	182	6	provides, not provide		Accepted	
60087	Evrendilek, Faith	6	183	183	6	domestic ?		Accepted	We added WASTEWATER after domestic.
60088	Thompson, Victoria	6	183	183	6	domestic WASTEWATER with emission factorS		Accepted	
60089	Thompson, Victoria	6	183	184	6	Delete sentence beginning with "Constructed wetland is an..." as it is repetitive		Rejected	Former sentence is explanation of 2006 IPCC Guidelines. We considered this sentence is needed.
60090	Thompson, Victoria	6	185	185	6	put "see Figure 6.1" in parentheses.		Rejected	This sentence is explanation of this SUPPLEMENT, whereas former sentence is explanation of 2006 IPCC Guidelines. We considered this sentence is needed. But figures 6.1 and 6.2 were reconstructed and merged.
60091	Thompson, Victoria	6	189	190	6	delete "as" after "considered". Next sentence should read "CH4 emissions from soild waste landfill leachate have already been taken into account..."		Accepted	
60092	Yamada, Masato	6	189		6	and Table 6.3 "As for solid waste landfill leachate, CH4 emissions have already been taken into account in solid waste disposal on land (6A) in the 2006 IPCC Guidelines" is not correct. Emissions from leachate discharged from landfill to outside was not taken into account in the 2006 Guidelines.		Rejected	In 2006 GLs, it is considered but not estimated because of insignificant emission. We added information in the thable 6.3.

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60093	Thompson, Victoria	6	190	190	6	Solid Waste Disposal on Land is CRF category 6A, not an IPCC Guidelines category, I believe.		Accepted with modifications	We changed it as follows. "solid waste disposal on land in chapter 3, volume 5 in the 2006 IPCC Guidelines"
60094	Thompson, Victoria	6	191	191	6	Authors should clarify which volume and Chapter of the IPCC GLs are being referred to.		Accepted	We added chapter and volume.
60095	Guendehou, Sabin	6	198	224	6	The definitions of tiers exist in the 2006 Guidelines, make reference to them or shorten the text.		Rejected	We believe that these sentence are need to understand this supplement
60096	Evrendilek, Faith	6	199	199	6	The following should be corrected: to which the waste generate CH4.		Accepted with modifications	The phrase was deleted according to the other comment.
60097	Thompson, Victoria	6	199	199	6	Delete "to which the waste generate CH4"		Accepted	
60098	Thompson, Victoria	6	201	201	6	Three tierS OF methods		Accepted	
60099	Evrendilek, Faith	6	206	207	6	country-specific - insert hyphen		Accepted	
60100	Chen, Gaungcheng	6	210	212	6	The factors that may influence GHGs emissions, e.g. plant species, coverage and composition of wastewater, should be considered under Tier 3 method so as to make it more complete.		Accepted	Revision has been done in the text
60101	Thompson, Victoria	6	212	212	6	systems, not system		Accepted	
60102	Penman, Jim	6	214	216		Is it true, though, that methane emissions will be less if operated aerobically? If so it is important to make the distinction methodologically		Rejected	It's already reflected to MCF. Sentence does not changed.
60103	Thompson, Victoria	6	214	214	6	Replace "But" with "However" followed by a comma		Accepted	

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60104	Thompson, Victoria	6	215	215	6	energy device, AND SO CH4 recovery		Accepted	
60105	Zhanyun, Ma	6	215	216		We should consider the vegetation harvesting, because the treatment process of constructed wetland is due to the plant and the microbe. The aquatic plants can be harvested each year, and the plants should have both purification effect and economic value in China.		Rejected.	We understand the situation. But we do not have enough references of biomass removal and dredging (maintenance) at this stage. See section 6.3.1.
60106	Kantawanich kul, Suwasa	6	218	221	6	The harvesting in tropical climate can be significant due to the rapid growth of macrophytes. Though the number of constructed wetlands in south Asia is rather low but from experience, the harvesting in tropical climate is done around twice a year.		Rejected	We understand the situation. But we do not have enough references of biomass removal and dredging (maintenance) at this stage. See section 6.3.1.
60107	Thompson, Victoria	6	218	218	6	small and ITS impact ON total emissions		Accepted	
60108	Thompson, Victoria	6	218	219	6	Can the authors provide a citation for this statement?		Accepted	References will be provided.
60109	Zhanyun, Ma	6	220	221		Equation 6.1 should consider the CH4 recovery, and the CH4 recovery default value may be 0. Because the CH4 recovery may produces during the burning.		Accepted	CH4 recovery has been addressed in chapter 6.1.1.
60110	Chen, Gaungcheng	6	226	229	6	A description of the relationship between CH4 emissions and BOD/COD provides the evidence for Equation 6.1.		Rejected	It is already explaine in 2006 IPCC GL in the introduction part
60111	Thompson, Victoria	6	226	226	6	delete "the" before Figure 6.4		Accepted	
60112	Thompson, Victoria	6	228	228	6	wetlands, wetland		Accepted	

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60113	Thompson, Victoria	6	229	229	6	replace "as follows" with "given in Equation 6.1"		Accepted	
60114	Thompson, Victoria	6	238	239	6	TOW and EF for estimation of CH ₄ emissions from constructed wetlands can be integrated WITH EQUATIONS IN THE 2006 IPCC GUIDELINES DEALING WITH DOMESTIC WASTEWATER (EQUATION 6.1) AND INDUSTRIAL WASTEWATER (EQUATION 6.4).		Accepted	
60115	Evrendilek, Faith	6	239	239	6	"Equation"		Accepted	
60116	Guendehou, Sabin	6	241	290	6	I would not recommend to develop a decision tree only for CH ₄ emissions from "constructed wetlands". The decision tree in Figure 6.2 of the 2006 IPCC Guidelines applies to all wastewater treatment systems. I suggest to delete Figure 6.4 and make reference to Figure 6.2 of the 2006 IPCC Guidelines. Otherwise, we will have to develop decision tree for other wastewater treatment systems.		Rejected	This is a specific decision tree for the CWs and it is needed for supplement. Decision tree will be revised.
60117	Thompson, Victoria	6	241	241	6	wetlands, not wetland		Accepted	
60118	Thompson, Victoria	6	249	252	6	It would make more sense if the first diamond-shaped box read "Are constructed wetlands used for wastewater treatment in-country?"		Accepted with modifications	Decision tree has been revised
60119	Thompson, Victoria	6	259	262	6	Diamond box: it is unclear what is meant by "measurement or bottom-up data"--should this say "directly measured data" or similar?		Accepted with modifications	Decision tree has been revised
60120	Thompson, Victoria	6	270	273	6	Diamond box: EFs, not EF. Rectangular box: hyphenate "country specific"		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60121	Thompson, Victoria	6	290	290	6	Label under Box 1 is missing the "1" in "Tier 1"		Accepted	
60122	Guendehou, Sabin	6	292	329	6	<p>The use in Equation 6.2 of terms VCF and TCF is a big contradiction to guidance provided in previous IPCC Guidelines (Revised 1996 IPCC Guidelines, GPG 2000 and 2006 IPCC Guidelines) on wastewater. We have never used these factors before; the MCF already takes into account temperature and other factors (like vegetation) that determine the extent of the anaerobic conditions (for e.g. below 15°C, significant CH₄ production is unlikely because methanogens are not active and the lagoon will serve principally as a sedimentation tank.</p> <p>However, when the temperature rises above 15°C, CH₄ production is likely to resume (2006 IPCC Guidelines, page 6.7)). I don't see a strong scientific evidence to justify the use of these factors. I strongly recommend that we continue to use the equation 6.2 and equation 6.5 of the 2006 IPCC Guidelines. MCF maybe updated based on new scientific findings; add uncertainty values on data in Table 6.4.</p>		Accepted with modifications	VCF and TCF were removed as indicated. Equations 6.2 and 6.5 are now in line with IPCC 2006 GLs.
60123	Thompson, Victoria	6	292	292	6	delete "a" before "wastewater treatment"; replace "by" with "using"; wetlands, not wetland		Accepted	
60124	Thompson, Victoria	6	305	305	6	terms of, not term of		Accepted	
60125	Yamada, Masato	6	305		6	Why parameters for organics is BOD for domestic wastewater and COD for industrial wastewater? This manner is applying only to some contries with specific regulatory.		Rejected	This manner is the same as the IPCC 2006 GLs for wastewater handlings.

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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
60126	Yamada, Masato	6	305		6	How to obtain country-specific or more detailed definitions of B0 should be instructed. There is no well-known or agreed standard for estimation. At least, how to obtain default maximum B0 in the 2006 Guidelines should be shown.		Rejected	It is from 2006 Guidelines. The estimate of Bo is almost equal to theoretical value
60127	Thompson, Victoria	6	306	306	6	delete space between "kg CH4/" and "kg COD"		Accepted	
60128	Evrendilek, Faith	6	307	307	6	country-specific data "are" - also, insert hyphen		Accepted	
60129	Thompson, Victoria	6	307	307	6	data ARE		Accepted	
60130	Chen, Gaungcheng	6	309		6	Can the Bo values for domestic and industrial wastewater in GL2006 applied as the default values in constructed wetland? The composition and treatment plant of CWs are different from those of wastewater treatment plant in GL2006, so the GHGs productions and emissions diver between these two treatment plants.		Rejected	The estimate of Bo is almost equal to theoretical value thus this can be used.
60131	Thompson, Victoria	6	309	310	6	Should this information be given in a table rather than a paragraph?		Accepted with modifications	We used the same value so we put in the paragraph
60132	Thompson, Victoria	6	312	312	6	THE MCF indicates		Accepted	
60133	Penman, Jim	6	313			Does this mean that the degree to which the system is anaerobic is just a function of CW type? In that case the statement on page 32 that CW systems can be operated aerobically or anaerobically is rather misleading, because the an/aerobic regime is fixed by CW type. Need to clarify this point, here or above		Accepted with modifications	The text has been revised.

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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
60134	Thompson, Victoria	6	314	315	6	hyphenate "literature based"		Accepted	
60135	Thompson, Victoria	6	315	315	6	CH4 conversion rateS (Table 6.2) is provided IN TABLE 6.4 [make sure Table is capitalized)		Accepted	
60136	Thompson, Victoria	6	318	318	6	Insert "The" at beginning of paragraph. No caps for "vegetation correction factor". Insert "The" before "constructed wetland"		Accepted with modifications	But this paragraph was deleted.
60137	Yamada, Masato	6	318		6	If aerenchyma is an air channel in the root of some plants, emissions of biogas will be enhanced and simultaneously supply of air will be enhanced. Then why VCF is 1.0 (or what is difference VCF from MCF)? Moreover, if VCF for nonaerenchymal is 0.6, where to go other 0.4 of biogas?		Accepted with modifications	Text related to aerenchyma was revised and VCF was removed.
60138	Thompson, Victoria	6	319	319	6	Insert "the" before "default"; insert "a" before "VCF"		Accepted with modifications	But this paragraph was deleted.
60139	Hopfensperger, Kristine	6	320	320	6	aerenchyma is important in stem as well as root		Accepted with modifications	Text related to aerenchyma was revised and VCF was removed.
60140	Thompson, Victoria	6	320	321	6	Move this sentence to before the sentence beginning "If aerenchymal plant types...". Change sentence as follows: "Aerenchyma ARE air channels in the roots of some plants THAT allow the DIRECT exchange of gases, INCLUDING METHANE, between the root and the shoot." Perhaps add examples of common aerenchymal plants that would be used in constructed wetlands.		Accepted with modifications	Text related to aerenchyma has been revised
60141	Thompson, Victoria	6	323	323	6	Insert "The" at beginning of paragraph. No caps for temperature correction factor". Insert "The" before "constructed wetland"		Accepted with modifications	This paragraph was deleted.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60142	Thompson, Victoria	6	327	329	6	Delete first sentence and last sentence of paragraph. Replace with: "WETLANDS GENERALLY HOST ANAEROBIC CONDITIONS; therefore the unknown typeS of semi-natural treatment wetlands can use the default MCF of 0.35 BECAUSE THIS CORRESPONDS TO THE ANAEROBIC CONDITIONS IN FWS WETLANDS. THE DEFAULT MCF OF 0.35 SHOULD ALSO BE USED FOR wastewater treated by natural wetlandS and coastal wetlandS." Move the paragraph to just before Table 6.4.		Accepted with modifications	These sentences have been revised.
60143	Chen, Gaungcheng	6	328		6	here provides the method for calculating CH4 emissions from natural and coastal wetlands. It seems that this is the first mention of these two wetlands in this chapter. The application of these wetlands in wastewater treatment, the emission of GHGs from wetlands and the estimation method are missed in the text.		Accepted with modifications	This sentence was removed.
60144	Penman, Jim	6	328	329		Are we saying that natural wetlands used for wastewater treatment should be considered managed? I think this would be justified, but it needs clarifying, and integrating with the methodology (e.g. the MFC value needs to be put in Table 6.4)		Accepted	If natural wetland used for WWT this will consider as semi natural wetland and already cover in the methodology. see definition.
60145	Thompson, Victoria	6	332	333	6	insert "the" before "population", "constructed wetland system", and "biochemical oxygen demand". Also insert a comma after "constructed wetland system"		Accepted	
60146	Thompson, Victoria	6	334	336	6	Note Volume # in IPCC GL.		Accepted	Volume number was added.
60147	Thompson, Victoria	6	334	334	6	insert "the" before "case"		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60148	Thompson, Victoria	6	336	336	6	insert "of" before "Chapter 6"		Accepted	
60149	Thompson, Victoria	6	339	339	6	The equationS for TOW ARE:		Accepted	
60150	Thompson, Victoria	6	352	352	6	Shouldn't this be population in the region served by the constructed wetland system, not necessarily the whole country?		Accepted	It was corrected as population in CWs.
60151	Kantawanich kul, Suwasa	6	353	353	6	BOD - country-specific per capita BOD generation in Thailand and many countries in tropical climates or developing countries are not valid and should be lower than developed country.		Accepted	If country has country specific value, they can used it
60152	Thompson, Victoria	6	357	357	6	wetlandS in THE		Accepted	
60153	Thompson, Victoria	6	359	359	6	wetlandS		Accepted	
60154	Yamada, Masato	6	360		6	In time series consistency, how to deal with emissions of CH ₄ (or N ₂ O) from organics stored on the bottom as sludge? Is it really negligible?		Rejected	Emission of sludge is already include in EF which is from the measurement (not sludge it is sediiment storage).
60155	Evrendilek, Faith	6	361	361	6	CH ₄ - correct subscript		Accepted	
60156	Kantawanich kul, Suwasa	6	361	361	6	CH ₄ : 4 should be subscript		Accepted	
60157	Thompson, Victoria	6	361	361	6	subscript 4 in CH ₄ ; wetlands, not wetland		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60158	Evrendilek, Faith	6	366	366	6	which "are" available		Accepted with modifications	This sentence was revised.
60159	Evrendilek, Faith	6	366	366	6	"From activity data"		Accepted	
60160	Thompson, Victoria	6	366	367	6	which ARE available; change comma after "years" to period; Countries MUST determine the fraction of THE population		Accepted with modifications	Former sentence was deteled. Latter is corrected as indicated.
60161	Thompson, Victoria	6	369	369	6	described in Chapter 5, Volume 1 OF THE 2006 IPCC Guidelines.		Accepted	
60162	Thompson, Victoria	6	370	370	6	insert "wetlands" after "constructed"		Accepted	
60163	Thompson, Victoria	6	373	373	6	Delete "Uncertainties" after "Chapter 3". Insert "the" before "2006 IPCC Guidelines"		Accepted	
60164	Evrendilek, Faith	6	375	375	6	Table"s"		Accepted	
60165	Evrendilek, Faith	6	375	375	6	"provide"		Accepted	
60166	Thompson, Victoria	6	375	375	6	TableS 6.7 and 6.10; provide, not provides		Accepted	
60167	Evrendilek, Faith	6	376	376	6	wastewater, respectively. - comma after wastewater		Accepted	
60168	Thompson, Victoria	6	376	376	6	factors, not factor; insert comma before "respectively"		Accepted	
60169	Hopfensperger, Kristine	6	379	379	6	delete word "is"		Accepted with modifications	According to the other comment, "that" is inserted before "is treated".

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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
60170	Thompson, Victoria	6	379	380	6	insert "that" before "is treated"; wetlands, not wetland; delete "receiving wastewater"--redundant. Question: doesn't the uncertainty of this quantity vary by country?		Accepted	
60171	Yamada, Masato	6	379		6	If quantity and quality data is not available at the inlet of wetlands, leakage and dilution of wastewater before inflowing to wetlands should be considered.		Rejected	It is the good practice to used inlet data. However, compiler can derive data from the best available that they have. At this step there is no consideration about the leakage and dilution. Nevertheless leakage and other data conversion used can increase uncertainty.
60172	Thompson, Victoria	6	385	385	6	insert hyphens after small and medium			
60173	Hopfensperger, Kristine	6	386	386	6	the word wetland should be plural "wetlands"			
60174	Thompson, Victoria	6	386	386	6	wetlands, not wetland			
60175	Evrendilek, Faith	6	387	387	6	that "were" involved		Accepted with modifications	Added "are" between "that" and "involved".
60176	Evrendilek, Faith	6	387	387	6	thiers ?		Accepted with modifications	This phrase was deleted.
60177	Hopfensperger, Kristine	6	387	387	6	add the word "are" between "that" and "involved" = that are involved...		Accepted	
60178	Hopfensperger, Kristine	6	387	387	6	the word "thiers" should be "their"		Accepted with modifications	This phrase was deleted.
60179	Thompson, Victoria	6	387	388	6	This sentence is confusingly worded--I'm not sure what is meant. "theirs" is also misspelled.		Accepted	This sentence was revised.

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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
60180	Hopfensperger, Kristine	6	388	388	6	Aerenchyma should not be capitalized		Accepted	This phrase was deleted.
60181	Thompson, Victoria	6	392	393	6	described in Chapter 6, Volume 1 OF THE 2006 IPCC Guidelines. Delete "Below"		Accepted	
60182	Thompson, Victoria	6	397	397	6	wetlands, not wetland		Accepted	
60183	Thompson, Victoria	6	399	399	6	values, not value		Accepted	
60184	Evrendilek, Faith	6	404	404	6	CH ₄ - correct subscript		Accepted	
60185	Thompson, Victoria	6	411	411	6	hyphenate "higher tier"		Accepted	
60186	Thompson, Victoria	6	414	414	6	insert period at end of sentence		Accepted	
60187	Thompson, Victoria	6	422	422	6	wetlands, not wetland		Accepted	
60188	Thompson, Victoria	6	427	427	6	systems, not system, and insert period after "systems"		Accepted	
60189	Thompson, Victoria	6	428	428	6	delete "the" after "so"		Accepted	
60190	Guendehou, Sabin	6	446	448	6	Delete the 2nd sentence and add scientific information on the nitrification and denitrification process.		Rejected	Refer to introduction part. We already mentioned
60191	Penman, Jim	6	447	448		Are there double counting issues with other parts of the 2006 GL that need to be considered?		Rejected	There is no double counting as the emission is the function of nitrogen loading: some information is indicated in 2006 GLs.
60192	Thompson, Victoria	6	447	447	6	insert "a" before "constructed"		Accepted	"constructed wetlands" will be changed to "a constructed wetland"
60193	Evrendilek, Faith	6	448	448	6	The following should be corrected: an emission factor to which the wastewater generate N ₂ O.		Accepted	This phrase was deleted.

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60194	Thompson, Victoria	6	448	448	6	delete "to which the wastewater generate N2O"		Accepted	
60195	Evrendilek, Faith	6	455	455	6	country-specific - insert hyphen		Accepted	
60196	Guendehou, Sabin	6	455	459	6	Delete the 2nd sentence, it is a repetition of what is said in the 1st sentence. I suggest to delete also the last two sentences.		Accepted	
60197	Thompson, Victoria	6	455	455	6	capitalize Tier 1		Accepted	
60198	Thompson, Victoria	6	456	456	6	factors, not factor		Accepted	
60199	Chen, Gaungcheng	6	458	459	6	revise this sentence as 'via reducing the substrates for nitrification and denitrification'		Accepted with modifications	This sentence was deleted.
60200	Thompson, Victoria	6	458	458	6	emissions, not emission (x2); delete "The" before "plant"		Accepted with modifications	This sentence was deleted.
60201	Guendehou, Sabin	6	461	463	6	This paragraph is unclear. What is vegetation? What is biomass? Otherwise, I suggest to delete the paragraph.		Accepted with modifications	It can not be removed as it is the information on harvesting. However, the term vegetation has been used for the sake of consistency.
60202	Thompson, Victoria	6	461	463	6	practices, not practice; Delete "condition"; wetlands, not wetland; emissions, not emission. This paragraph is generally awkward not not very logical		Accepted	
60203	Thompson, Victoria	6	465	465	6	wetlands, not wetland		Accepted	
60204	Thompson, Victoria	6	466	466	6	emissions, not emission		Accepted	
60205	Chen, Gaungcheng	6	469		6	the sentence is incomplete, and should be rewritten.		Rejected	It is complete.

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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
60206	Thompson, Victoria	6	469	469	6	is SHOWN in the Figure 6.5		Accepted	
60207	Thompson, Victoria	6	471	471	6	wetlands, not wetland; emissions, not emission		Accepted	
60208	Thompson, Victoria	6	472	472	6	wastewater is SHOWN in Equation 6.5.		Accepted	
60209	Thompson, Victoria	6	478	478	6	emissions, not emission		Accepted	
60210	Thompson, Victoria	6	479	479	6	Capital T in Total; wetlands, not wetland; "the" before "inventory year"		Accepted	
60211	Thompson, Victoria	6	481	481	6	Capital E Emission factor		Accepted	
60212	Kantawanich kul, Suwasa	6	482	482	6	44/28 in equation 6.5 should be explained		Accepted	We added the explanation "The factor 44/28 is the conversion of kg N2O-N into kg N2O. ".
60213	Guendehou, Sabin	6	483	515	6	I don't think we need the decision tree in Figure 6.5. The application of the method in Equation 6.5 is straightforward. Guidance is just needed on how to derive data to apply the Equation. Furthermore, the decision tree is saying that when data on wastewater treatment in constructed wetlands is not available, emissions are not to be estimated. This is not a good guidance.		Accepted with modifications	We will revised decision tree. We will keep it as it is informative to compilers.
60214	Thompson, Victoria	6	490	493	6	It would make more sense if the first diamond-shaped box read "Are constructed wetlands used for wastewater treatment in-country?"		Accepted with modifications	The decision tree was revised.

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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
60215	Thompson, Victoria	6	501	504	6	Diamond box: it is unclear what is meant by "measurement or bottom-up data"--should this say "directly measured data" or similar?		Accepted with modifications	We revised the decision to be in line with methane.
60216	Yamada, Masato	6	516		6	Did the default EF of 0.00075 kg N ₂ O-N/kg obtained under what kinds of conditions (region, climate, CWs configuration or so on)?		Accepted	We have revisited the data and revised the number according to our best available data that we have. EFs have been provided for each type of CW.
60217	Chen, Gaungcheng	6	517		6	any literature supports the default emission factor?		Accepted	See 60216
60218	Chen, Gaungcheng	6	517		6	Again, I suggest considering temperature as one of the key factors when calculating the N ₂ O emissions from CWs.		Rejected	The mechanism of temperature effects on N ₂ O emission is complicated, and information is not enough. The effect of temperature to N ₂ O is not clear according to our literature-based analysis.
60219	Thompson, Victoria	6	518	518	6	literature, not literatures		Rejected	We used many literatures to calculate EFs.
60220	Evrendilek, Faith	6	524	524	6	The activity data for this source category "are"		Accepted	
60221	Thompson, Victoria	6	525	525	6	wetlands, not wetland; insert "the" before "population" and "constructed"		Accepted	
60222	Thompson, Victoria	6	526	526	6	lowercase p protein; insert "a" before "factor"		Accepted	
60223	Thompson, Victoria	6	527	527	6	insert "the" before "inventory year"		Accepted	
60224	Thompson, Victoria	6	538	538	6	insert "the" after "treated in"		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60225	Thompson, Victoria	6	540	540	6	Shouldn't this be population in the region served by the constructed wetland system, not necessarily the whole country?		Accepted	This sentence was revised.
60226	Kantawanichkul, Suwasa	6	546	546	6	closing parenthesis is missing		Accepted	
60227	Kantawanichkul, Suwasa	6	548	548	6	kgN/m ³ : 3 should be subscript		Accepted	
60228	Thompson, Victoria	6	551	551	6	delete space between open parenthesis and "Table"		Accepted	
60229	Thompson, Victoria	6	552	552	6	capital G Guidelines		Accepted	
60230	Lund, Herluf Gyde	6	556	556	6	Samokhin (1986) is listed In references, but is run in with another. See lines 655-658.		Accepted	
60231	Thompson, Victoria	6	559	560	6	wetlands, not wetland; delete "treating wastewater"; insert "the" before "default"		Accepted	
60232	Thompson, Victoria	6	564	564	6	delete "number of"		Accepted	
60233	Thompson, Victoria	6	573	573	6	delete "estimate"		Accepted	
60234	Thompson, Victoria	6	585	585	6	replace "Documentation, archiving and reporting" with "of the 2006 IPCC Guidelines"		Accepted	
60235	Lund, Herluf Gyde	6	595	596	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60236	Lund, Herluf Gyde	6	595	595	6	Authors are Fey, A.; Benckiser, G.; Ottow, J. C. G.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60237	Lund, Herluf Gyde	6	597	599	6	Not cited in text.		Accepted with modifications	This was removed from the list.
60238	Lund, Herluf Gyde	6	597	597	6	Authors are Fuchs VJ, Mihelcic JR, Gierke JS.		Accepted with modifications	This was removed from the list.
60239	Lund, Herluf Gyde	6	600	601	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60240	Lund, Herluf Gyde	6	600	600	6	Authors are García J, Capel V, Castro A, Ruíz I, Soto M.		Accepted	
60241	Lund, Herluf Gyde	6	602	603	6	Not cited in text.		Accepted with modifications	This was removed from the list.
60242	Lund, Herluf Gyde	6	603	603	6	Consider adding URL http://swamp.osu.edu/news/orwramsar/pdfs/06-004.pdf		Accepted	Thank you for your information.
60243	Lund, Herluf Gyde	6	607	608	6	Not cited in text.		Accepted	
60244	Lund, Herluf Gyde	6	607	607	6	Add Ro, K.S. as third and last author.		Accepted with modifications	
60245	Lund, Herluf Gyde	6	608	608	6	Consider adding URL http://www.ars.usda.gov/SP2UserFiles/Place/66570000/Manuscripts/2007/Man758.pdf		Accepted	
60246	Lund, Herluf Gyde	6	609	610	6	Not cited in text.		Accepted	
60247	Lund, Herluf Gyde	6	609	609	6	Authors are Hunt, P.G., Stone, K.C., Matheny, T.A., Poach, M.E., Vanotti, M.B., Ducey, T.F		Accepted with modifications	Thank you for your information. But this literature was removed from the list.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60248	Lund, Herluf Gyde	6	610	610	6	Consider adding URL http://naldc.nal.usda.gov/download/44322/PDF		Accepted	
60249	Lund, Herluf Gyde	6	613	614	6	Not cited in text.		Accepted	This was removed from the list.
60250	Lund, Herluf Gyde	6	615	616	6	Not cited in text.		Accepted with modifications	Accepted with modifications. this literature was mentioned in the table 6.2
60251	Lund, Herluf Gyde	6	615	615	6	Authors are Inamori, R., Gui, P., Dass, P., Matsumura, M., Xu, K.Q., Kondo, T., Ebie, Y., Inamori, Y.,		Accepted	Corrected as indicated.
60252	Lund, Herluf Gyde	6	617	618	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60253	Lund, Herluf Gyde	6	617	617	6	Authors are Inamori R, Wang Y, Yamamoto T, Zhang J, Kong H, Xu K, Inamori Y.		Accepted	
60254	Lund, Herluf Gyde	6	619	620	6	Not cited in text.		Accepted	This was removed from the list.
60255	Lund, Herluf Gyde	6	619	619	6	Authors are Jia, W., Zhang, J.; Li, P., Xie, H., Wu, J., Wang, J.		Accepted with modifications	This was removed from the list.
60256	Lund, Herluf Gyde	6	621	623	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60257	Lund, Herluf Gyde	6	621	621	6	Authors are Johansson AE, Gustavsson AM, Oquist MG, Svensson BH.		Accepted	
60258	Lund, Herluf Gyde	6	624	635	6	Not cited in text.		Accepted	This was removed from the list.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60259	Lund, Herluf Gyde	6	624	624	6	Authors are Johansson, A.E., Kasimir, Klemedtsson A., Klemedtsson, L., Svensson, Bo		Accepted with modifications	This was removed from the list.
60260	Lund, Herluf Gyde	6	625	625	6	Consider adding URL http://journals.sfu.ca/coaction/index.php/tellusb/article/download/16363/18266		Accepted	
60261	Lund, Herluf Gyde	6	626	626	6	Authors are Kjeldsen P, Barlaz MA, Rooker AP, Baun A, Ledin A, Christensen TH.		Accepted	
60262	Lund, Herluf Gyde	6	627	627	6	Consider adding URL http://cues.rutgers.edu/bioreactorlandfill/pdfs/15-Kjeldsenetal2002CritRevEnvSciLandfillLeachat.pdf		Accepted	
60263	Lund, Herluf Gyde	6	628	629	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60264	Lund, Herluf Gyde	6	628	628	6	Authors are Liikanen, A.; Huttunen, J. T.; Karjalainen, S. M.; Heikkinen, K.; Vaisanen, T. S.; Nykanen, H.; Martikainen, P. J		Accepted	
60265	Lund, Herluf Gyde	6	630	631	6	Not cited in text.		Accepted	This was removed from the list.
60266	Lund, Herluf Gyde	6	630	630	6	Authors are Maltais-Landry G, Maranger R, Brisson J, Chazarenc F.		Accepted with modifications	This was removed from the list.
60267	Lund, Herluf Gyde	6	632	634	6	Not in references.		Accepted with modifications	This literature was mentioned in the table 6.2
60268	Lund, Herluf Gyde	6	640	640	6	List authors as Mander, U., Jenssen, P.D.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60269	Lund, Herluf Gyde	6	643	644	6	Not cited in text.		Accepted	This was removed from the list.
60270	Lund, Herluf Gyde	6	643	643	6	Authors are Mitsch, W.J., Zhang, L., Anderson, C.J., Altor, A.E., and Hernandez, M.E.		Accepted with modifications	This was removed from the list.
60271	Lund, Herluf Gyde	6	644	644	6	Consider adding URL http://swamp.osu.edu/news/ORWRamsar/PDFs/05-010.PDF		Accepted	
60272	Lund, Herluf Gyde	6	645	646	6	Not cited in text.		Accepted	This was removed from the list.
60273	Lund, Herluf Gyde	6	645	645	6	Third and final author is Heal, K.V.		Accepted with modifications	This was removed from the list.
60274	Lund, Herluf Gyde	6	646	646	6	Consider adding URL http://www.universitas212.bham.ac.uk/GRC/GRC2008/PangalaProceedings.pdf		Accepted	
60275	Lund, Herluf Gyde	6	649	650	6	Not cited in text.		Accepted	This was removed from the list.
60276	Lund, Herluf Gyde	6	649	649	6	Authors are Pei-dong Tai, Pei-jun Li, Tie-heng Sun, Yao-wu He, Qi-xing Zhou, Zong-qiang Gong, Motoyuki Mizouchi, Yuhei Inamori - I am not sure which part is the last name		Accepted with modifications	This was removed from the list.
60277	Lund, Herluf Gyde	6	650	650	6	Consider adding URL http://www.jesc.ac.cn/jesc_cn/ch/reader/create_pdf.aspx?file_no=20020105&year_id=2002&quarter_id=1&falg=1		Accepted	
60278	Lund, Herluf Gyde	6	651	652	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60279	Lund, Herluf Gyde	6	652	652	6	Consider adding URL		Rejected	The URL was not added, however we already have this literature.
60280	Lund, Herluf Gyde	6	653	654	6	Not cited in text.		Accepted	This was removed from the list.
60281	Lund, Herluf Gyde	6	653	653	6	Authors are Rückauf U, Augustin J, Russow R, Merbach W		Accepted with modifications	This was removed from the list.
60282	Lund, Herluf Gyde	6	656	656	6	Consider adding URL for Salm et al. http://www.peatnet.siu.edu/Assets/S.pdf		Rejected	Thank you for your information. But we do not add URL in the list.
60283	Lund, Herluf Gyde	6	657	657	6	This should be a separate reference. Samokhin, V.N. (1986). "Design Handbook of Wastewater Systems: Vol.3, Municipal and Industrial Systems, Allerton Press, Inc., New York.		Accepted	
60284	Lund, Herluf Gyde	6	658	658	6	For Samokhin 1986 - 1060 pages		Accepted	We added the information.
60285	Lund, Herluf Gyde	6	659	660	6	Not cited in text.		Accepted	This was removed from the list.
60286	Lund, Herluf Gyde	6	659	659	6	Authors - Silvan, N., Tuittila, E.S., Kitunen, V., Vasander, H., Laine, J.. <i>Eriophorum vaginatum</i> should be in italics.		Accepted with modifications	This was removed from the list.
60287	Lund, Herluf Gyde	6	661	661	6	Authors are Soosaar, K.; Mander, Ü.; Maddison, M.; Kanal, A.; Kull, A.; Lõhmus, K.; Truu, J.; Augustin, J.		Accepted	
60288	Lund, Herluf Gyde	6	663	663	6	Consider adding URL http://www.alkranel.ee/gaas/Soosaar.pdf		Rejected	
60289	Lund, Herluf Gyde	6	664	665	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60290	Lund, Herluf Gyde	6	669	670	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60291	Lund, Herluf Gyde	6	671	673	6	Not cited in text.		Accepted	This was removed from the list.
60292	Lund, Herluf Gyde	6	671	671	6	Authors are Stadmark, J.; Seifert, A.-G; Leonardson, L.		Accepted with modifications	This was removed from the list.
60293	Lund, Herluf Gyde	6	674	675	6	Not cited in text.		Accepted	This was removed from the list.
60294	Lund, Herluf Gyde	6	674	674	6	Authors are Suda ,K., Shahbazi, A., Li, Y.		Accepted with modifications	This was removed from the list.
60295	Lund, Herluf Gyde	6	675	675	6	Consider adding URL http://www.springer.com/cda/content/document/cda_downloaddocument/9780387884820-c2.pdf?SGWID=0-0-45-734913-p173849328		Rejected	This was removed from the list.
60296	Lund, Herluf Gyde	6	676	677	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60297	Lund, Herluf Gyde	6	678	679	6	Not cited in text.		Accepted	This was removed from the list.
60298	Lund, Herluf Gyde	6	678	678	6	Authors are Toet S., Huibers L.H.F.A., van Logtestijn R.S.P., Verhoeven J.T.A.		Accepted with modifications	This was removed from the list.
60299	Lund, Herluf Gyde	6	679	679	6	Consider adding URL http://www.falw.vu.nl/en/Images/Toet2003_tcm24-94681.pdf		Rejected	This was removed from the list.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60300	Lund, Herluf Gyde	6	680	681	6	Not cited in text.		Accepted	This was removed from the list.
60301	Lund, Herluf Gyde	6	680	680	6	Authors are Uggetti E, García J, Lind SE, Martikainen PJ, Ferrer I.		Accepted with modifications	This was removed from the list.
60302	Lund, Herluf Gyde	6	682	684	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60303	Lund, Herluf Gyde	6	690	691	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60304	Lund, Herluf Gyde	6	690	690	6	Authors are Wang Y, Inamori R, Kong H, Xu K, Inamori Y, Kondo T, Zhang J.		Accepted	
60305	Lund, Herluf Gyde	6	692	693	6	Not cited in text.		Accepted with modifications	This literature was mentioned in the table 6.2
60306	Lund, Herluf Gyde	6	692	692	6	Authors are Wild U.; Kamp T.; Lenz A.; Heinz S.; Pfadenhauer J. <i>Typha</i> should be italics...I think.		Accepted	
60307	Lund, Herluf Gyde	6	694	697	6	Neither cited in text. Should they be, one should be 2009a and the other 2009b.		Accepted with modifications	Latter one (Bioresource Technology) was deleted.
60308	Lund, Herluf Gyde	6	694	694	6	Authors are Wu, J., Zhang, J., Jia, W., Xie, H., Zhang, B.		Accepted	
60309	Lund, Herluf Gyde	6	696	696	6	Authors are Wu J, Zhang J, Jia W, Xie H, Gu RR, Li C, Gao B.		Accepted with modifications	This was removed from the list.
60310	Lund, Herluf Gyde	6	698	698	6	Authors are Yu, XF, Zou, YC, Jiang, M, Lu, XG, Wang, GP		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60311	Lund, Herluf Gyde	6	699	699	6	Consider adding URL http://www.planta.cn/forum/files_planta/1001_125.pdf		Rejected	Thank you for your information. But we do not add URL in the list.
60312	Lund, Herluf Gyde	6	700	702	6	Not cited in text.		Accepted	This was removed from the list.
60313	Lund, Herluf Gyde	6	700	700	6	Authors are Zaman, M., Nguyen, M.L., Gold, A.J., Groffman, P.M., Kellogg, D.Q. and Wilcock, R.J		Accepted with modifications	This was removed from the list.
60314	Lund, Herluf Gyde	6	702	702	6	Consider adding URL http://findarticles.com/p/articles/mi_hb3364/is_6-7_46/ai_n31677619/		Rejected	Thank you for your information. But we do not add URL in the list.
60315	Lund, Herluf Gyde	6	703	704	6	Not cited in text.		Accepted	This was removed from the list.
60316	Lund, Herluf Gyde	6	703	703	6	Authors are Zhou, S., Hou, H., Hosomi, M.		Accepted with modifications	This was removed from the list.
60317	Thompson, Victoria	6	Figure 6.1	Figure 6.1	6	This diagram implies that surface flow and sub-surface flow systems only occur in systems with emergent plants, which is inaccurate.		Accepted with modifications	Figures 6.1 and 6.2 were reconstructed and merged.
60318	Thompson, Victoria	6	Figure 6.3	Figure 6.3	6	Estuaries not "Estuarine". I don't think "sewered" is a word--could simply say "Sewer to plant" Remove arrowheads from connectors--unnecessary and distracting. Also, it would be useful to define what "collected" and "uncollected" mean somewhere in the document--it is counterintuitive to the layperson that "uncollected" wastewater could be treated.		Accepted with modifications	We revised the figure in accordance with figure 6.1 of chapter 6, volume 5 in 2006 GLs. Definitions of "collected" and "uncollected" have already been mentioned in 2006 GLs. So we think we do not have to repeat it in this supplement.
60319	Hopfensperger, Kristine	6	General		6	What about constructed wetlands for urban stormwater runoff?		Rejected	There are not enough literatures.

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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
60320	Yamada, Masato	6	Table 6.2		6	Table 6.2 number of sample (n) should be presented.		Accepted	Table 6.2 is revised . We indicate average, std error and range. This numbers are from analysis.
60321	Thompson, Victoria	6	Table 6.3	Table 6.3	6	I question the utility of this table. At the very least it is incomplete, since, for example, CH4 and N2O from Domestic Wastewater are covered not just in the Wetlands Supplement (as stated) but also in the 2006 GL. It is unclear from this table and preceding paragraphs, as written, whether this chapter is meant to REPLACE the 2006 GL guidance on wastewater, or merely to supplement it with information specific to constructed wetlands. The answer to this question should be made clear.		Accepted	This table is specific for constructed wetlands and for the information for compilers. We revise the topics of table 6.3 to "Coverage of Wastewater types and GHG gases from CWs". This is the supplement of 2006 GL on Chapter 6 vol 5.
60322	Penman, Jim	6	Table 6.3			Is this coverage substantially complete?		Accepted	The table was revised.
60323	Thompson, Victoria	6	Table 6.4	Table 6.4	6	Title: type of constructed wetland, not types of constructed wetlands. Column 1: write out abbreviations. Also include information about unknown wetland types and wastewater treated in natural wetlands in the Table.		Accepted	The title has been corrected as indicated. The words in first column were spelled out. Based on the basic concept of reporting, highest MCF must be chosen if type of CW cannot be recognized. Or use country-specific data as higher tier. We explained in the text.
60324	Thompson, Victoria	6	Table 6.5	Table 6.5	6	correction factor does not need to be capitalized. Can citations be provided for the data in this table? VCF: Change sentence to "Can be very uncertain depending on typeS of plantS used" (note deletion of "this data" and "in CWs"). Same for similar sentence under TCF, but language should be changed to reflect temperature, rather than plants. "0%" not "zero %" "		Accepted with modifications	VCF and TCF were removed responding to the other comments.
60325	Thompson, Victoria	6	Table 6.7	Table 6.7	6	Please provide citations		Accepted	EFs and its uncertainties were revised in accordance with table 6.2 with references provided. Others are from 2006GLs.

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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
60326	Beltran, Natalia Gutierrez	6			6.2.2	It is important that reporting guidelines make recommendations for non-Annex I countries on procedures to complete time series, since this group of countries usually faces several difficulties when consolidating data.		Accepted	Since Time series is the cross cutting issue. Common recommendations for producing consistent time series are addressed in chapter 7.
60327	Chen, Gaungcheng	6			6	The exchanges of GHGs between CWs and atmosphere are different among the four CWs in Fig 6.2. For HSSF, the EF is the flux between soil and atmosphere, and for VSSF, the exchange happens both between soil and atmosphere, and between water and atmosphere. While for FFP and FWS, the GHGs exchange between water and atmosphere. This leads to the difference in the sampling method of GHGs. This difference should be considered under the higher Tier method.		Accepted	Default EF can cover types indicated in fig 6.2. As you mentioned advance/detail measurement can be used in higher tiers. In SOD, Figures 6.1 and 6.2 were reconstructed and merged.
60328	Chen, Gaungcheng	6			6	Table 6.2, does FFP CWs share the same conversion rate with FWS CWs? The authors mentioned FFP CWs but did no provide the estimation method for this CW. 11. Section 6.2.1, it is better to include the description of three Tiers of method in Section 6.2.1.1.		Accepted	Table 6.2 has been elaborated in more details. Figures 6.1 and 6.2 were reconstructed and merged. In new figure 6.1, there are 6 types of CWs. There are 4 types of FS CWs. Then, MCF for FS can be applied to all 4 types of FS CWs. The compilers can use original EF for each SF CW in higher tier, if they have country-specific data. Tier 1,2,3 are general described as the basic information. 6.2.1.1 refer to the decision tree where compiler can make their choice.
60329	Chen, Gaungcheng	6			6	In Figure 6.4, what do Bo and MCF stand for?		Accepted	See equation 6.2

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60330	Guendehou, Sabin	6			6	Constructed wetlands systems defined here as fully human-made are similar to "wastewater treatment systems (WWT)" addressed in the waste chapter of the 2006 IPCC Guidelines. I would define constructed wetlands (in the context of this chapter) as natural wetlands modified through human activity for the purpose of wastewater treatment (for e.g. modification of a river). It is like a managed wetland to be reported in AFOLU, which means vegetation may exist and therefore changes in C stocks (from vegetation, soil) and CH ₄ and N ₂ O (mainly from wastewater treatment) are to be estimated. Otherwise, the constructed wetlands should meet the definition of wetlands in the 2006 Guidelines. Guidance to estimate changes in C stocks should be added in this chapter or reference should be made to the 2006 IPCC Guidelines. I think it is critical to define a number of criteria that the constructed wetlands should meet before being classified as AFOLU categories, otherwise they should be considered as WWT systems and reported in waste. There is a high probability that these fully human-made systems will be reported in waste and not in AFOLU by inventory compilers.		Rejected	This chapter is supplement for Wastewater chapter 6 volume 4 of IPCC 2006 GLs. See relation in 6.1.1 "relation to 2006 IPCC GL" This chapter is dealing with non- CO ₂ fluxes estimated from CWs only we are not providing the method for C stock change. Definition of "Semi-natural treatment wetlands" was added to section 6.1 "definition".
60331	Guendehou, Sabin	6			6	How C storage in these constructed wetlands can be estimated? Stabilisation of organic matter at the bottom of the systems. See Figure 6.2		Rejected	This chapter is dealing with non- CO ₂ fluxes estimated from CWs only. We are not providing the method for C stock change due to scientific knowledge, to this extent is still not enough to make conclusion of the methodology.

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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
60332	Guendehou, Sabin	6			6	Wetlands is AFOLU category and this chapter deals with entirely emissions from wastewater treatment. It is very hard to see the links with AFOLU, except when the WWT system is being established. The construction of WWT systems may be associated with a land-use change (and C stock changes to be estimated), but when the system becomes operational, it should be considered as WWT system and emissions or storage of C (for e.g. at the bottom of the system) reported in waste. Also, the chapter does not provide guidance on where emissions should be reported: in AFOLU or in Waste?		Accepted with modifications	This chapter is supplement for Wastewater chapter 6 volume 4 of IPCC 2006. See relation in 6.1.1 "relation to 2006 IPCC GL" This chapter is dealing with non- CO2 fluxes estimated from CWs only we are not providing the method for C stock change. We also added a sentence about land-use category in introduction part.
60333	Guendehou, Sabin	6			6	The whole chapter should be shorten and include more reference to chapter 6 of the 2006 IPCC Guidelines.		Accepted	We will do our best
60334	Yamada, Masato	6			6	General: Degree of maintenance of CWs should be important parameter to estimate GHG emissions. Especially, frequency of dredging should be affecting amounts of emissions from sludge at bottom or media.		Rejected	We do not have enough references of biomass removal and dredging (maintenance) at this stage. In addition, biomass removal did not done regularly every year. See section 6.3.1.
60335	Garcia-Apaza, Emilio	6	general			clarify relationship with what is covered in waste sector to ensure that CH4 is not double-counted	Attachment_6 0335.pdf	Accepted	This is the supplement for chapter 6 "wastewater treatment and discharge" of volume 5 in 2006 GLs, and there is no double counting. We revised text to be more understandable.
60336	Pipatti, Riitta	6	General			General - abbreviations are used frequently and not always explained - please provide meanings for all abbreviations before they are used.		Accepted	
60337	Pipatti, Riitta	6	151	152		Incomplete sentence?		Accepted with modifications	This sentence was deleted.
60338	Pipatti, Riitta	6	483	515		The decision tree could start with a question "Does CW occur in the country"?		Accepted with modifications	This figure was revised.

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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
60339	Gyldenkarne, Steen	6	153	153		Table 6.2 The conversion rates is missing the domination. For CH4 it is 40. Forty of what. A conversion of TN (total nitrogen?) of 0.24 to N2O-N is very unlikely. References are missing.		Accepted	Table 6.2 will be revised and references will be provided. Sample sizes and the unit will be provided
60340	Gyldenkarne, Steen	6	293	293		MCF (Methane Correction Factor)- I would like to change the wording so it is equal to AFOLU chapter 10 (agr. and manure management) and not following the the waste definition and renamed to "Methane Conversion Factor" because it is a conversion factor as it indicates the share of available OM which is converted to CH4. MCF depends on the temperature and other climatic condions and therefore varies over the globe. It is not a correction factor. "The MCF represents the methane producing potential of a specific manure management system. MCF values range from 0 to 100 percent and reflect the capability of a system to produce the maximum achievable methane based on the readily biodegradable organic matter present in the manure. A higher MCF equates to a higher methane producing potential".The B0 is an "apperant correction factor" as it indicates how much of the OM which actually can be converted. The estimation should follow an ISO-standard. Roughly pig manure has a B0 of 0.35, beef manure 0.17-0.2 and dairy manure 0.2-0.24. The theoretical value is 0.48, but because the different organic materials varies in how easy it is degraded the laboratories are trying to define an endpoint where the degradation rate is very slow and giving this endpoint the B0 value. Then the MCF factor should vary according to climatic and environmental conditions with either the absolute value or eventually supplied with a temperature correction factor. The MCF in table 6.4 is apperantly estimated from Table 6.2 . There is probably errors in Table 6.2 and it is therefore difficult to give a prober comment on this.		Rejected	We follow chapter 6 of volume 5 in the IPCC 2006 GLs as the supplement of that chapter.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60341	Gyldenkarne, Steen	6	317	317		Table 6.4. The MCF factors should be given under defined conditions, eg. 30°C and given retention time. It is not clear if the data in table 6.4 is given for warm/tropical conditions and under which vegetation conditions they are given. Can it be concluded that all CW types have a full coverage of aerenchymal plants and that the 0.6 factor for non-aerenchymal plants is there these are totally absent.		Accepted with modifications	VCF and TCF were removed responding to the other comments. The MCF values are derived from the actual measurement data and recommend as the default value. Country with specific relation data to temperature and retention time can use as country specific data in the higher tier. We did not use the factor of aerenchymal plants in the equation.
60342	Gyldenkarne, Steen	6	295	297		Eq. 6.2: The TCF factor is recommended to be changed to the van't Hoff-Aaenius equation below and following the outline in the: http://americancarbonregistry.org/carbon-accounting/ACR%20Livestock%20MMS%20Standard%20-%20PUBLIC%20COMMENT%20DRAFT%2005072010.pdf , pp 33. It can be assumed that the loading to CW will be the same though out the year and thus the emission can be estimated by summarizing the monthly emissions. The currently recommended TCF of 1 and 0.6 seems very broad.		Accepted with modifications	Due to several comments, we removed TCF factor. Country with specific data related to temperature can use in the higher tier. According to the methodology, activity data and annual average can be done.
60343	Gyldenkarne, Steen	6	295	297		see attachment	Attachment_6 0343.pdf	Accepted with modifications	See 60342
60344	Gyldenkarne, Steen	6	352	352		I think the population should not be the whole population in the country but only the number which is actually using CW		Accepted	Exactly. It was corrected.
60345	Gyldenkarne, Steen	6	353	353		Are there differences in BOD between areas having proper WWTP and in areas where CW are used?		Rejected	We have used same values in IPCC 2006GLs.
60346	Gyldenkarne, Steen	6	352	352		I think the population should not be the whole population in the country but only the number which is actually using CW		Accepted	Exactly. It was corrected.

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60347	Gyldenkarne, Steen	6	370	370		the word "wetlands" is missing		Accepted	
60348	Gyldenkarne, Steen	6	389	389		Methane correction factor should be changed to "Methane conversion factor"		Rejected	We follow chapter 6 of volume 5 in the IPCC 2006 GLs as the supplement of that chapter.
60349	Gyldenkarne, Steen	6	517	517		The emission N ₂ O-N factor of 0.00075 is three times lower than for leached N into riverine streams. Why this difference. I would still recommend that CW made solely for nitrogen removal from diffusive sources are covered here too.		Accepted	We have revisited the data and revised the number according to our best available data that we have. EFs have been provided for each type of CW.
60350	Gyldenkarne, Steen	6	532	532		spelling error		Rejected	We could not find spelling error at this line.
60351	Gyldenkarne, Steen	6	540	540		I think the population should not be the whole population in the country but only the number which is actually using CW		Accepted	
60352	Gyldenkarne, Steen	6	554	554		Aren't there any new figures available?		Rejected	We did not find new figures.
60353	Jamsranjav, Baasansuren	6	60	63		Reference to quotation should be included in the text as well as in reference list		Accepted	
60354	Garneau, Michelle	6	65			Vymazal, 2007: not in the references		Accepted	The literature was added to the reference list.
60355	Hunt, Patrick G	6	69			The word "coal" should be deleted so as to infer the general use of constructed wetlands for nine drainage treatment.		Accepted	
60356	Garneau, Michelle	6	73			US EPA, 2000: not in the references		Accepted	The literature was added to the reference list. Published year was corrected.

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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
60357	Joosten, Hans	6	82	82		the "combined" (past sense) implies that it is no longer done. SO better rephrase to "to guarantee more effective removal of ammonia and total nitrogen, an enhanced design approach combines vertical and horizontal flow constructed wetlands"		Rejected	We think this phrase is understandable for readers.
60358	Garneau, Michelle	6	83			Vymazal, 2011: not in the references		Accepted	The literature was added to the reference list.
60359	Joosten, Hans	6	92	92		where are the FFPs in this overview?		Accepted with modifications	The figures 6.1 and 6.2 was revised. We hope this would help readers understanding.
60360	Garneau, Michelle	6	94			Kadlec and Wallace 2008: not in the references. Verify the year (2008 in the text and 2009 in the references)		Accepted	
60361	Joosten, Hans	6	101	101		rephrase "the wastewater is fed in at the inlet and flows" to "the wastewater flows from the inlet"		Accepted	
60362	Garneau, Michelle	6	108			Vymazal and Kröpfelova 2008: not in the references		Accepted	The literature was added to the reference list.
60363	Joosten, Hans	6	118	118		replace "On the other hand," by "Consequently,"		Accepted	
60364	Garneau, Michelle	6	118			Cooper 2005: not in the references		Accepted	The literature was added to the reference list.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60365	Joosten, Hans	6	137	137		it is unclear where "which importance has been increasing recently" is referring to: to the constructed wetlands, to the volume of GHG emissions, or to the awareness of the problem, so rephrase		Accepted with modifications	We revised as follows. "constructed wetlands, the importance of which has been increasing recently."
60366	Joosten, Hans	6	143	143		skip the "literature-based" from the text (the relationship is not literature-based, and phrasing) and the relevant literature to the table.		Accepted with modifications	The relevant literatures were added below the table.
60367	Joosten, Hans	6	147	147		replace "Also," with "The"		Accepted	
60368	Jamsranjav, Baasansuren	6	149	151		"High emission factor for CH ₄ in FWS CWs is caused by the additional CH ₄ from sediments accumulated in the bottom of surface flow wetlands"-This should be explained and supported by data/reference.		Accepted with modifications	
60369	Garneau, Michelle	6	151	152		CH ₄ and N ₂ O and other environmental factors		Accepted with modifications	Thank you. But the sentence was deleted.
60370	Joosten, Hans	6	152	152		replace "other environmental factors" by "and other environmental factors"		Accepted with modifications	Thank you. But the sentence was deleted.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60371	Joosten, Hans	6	152	153		rephrase heading of table 6.2. (to something like "CONVERSION RATE OF INITIAL LOADING OF TOTAL ORGANIC C AND TOTAL N to CH ₄ -C AND N ₂ O-N" and add unit (kg/kg?). The latter will also clarify the figures. A conversion rate of 40 seems extreme to me: does it really mean that 40 times more CH ₄ -C comes out of the system than your loading of total OC? That would be an effective CH ₄ generator...		Accepted with modifications	Table 6.2 was revised. The heading of the table was changed and the units was indicated.
60372	Garneau, Michelle	6	156			Van der Zaag 2010: Verify the name (Van der Zaag), not the same in the references (Vander-Zaag). Add et al.,		Accepted	
60373	Garneau, Michelle	6	161			Altor and Mitsch (2008): not in the references		Accepted	The literature was added to the reference list.
60374	Garneau, Michelle	6	167			2006 Guidelines, IPCC, 2006): not in the references		Accepted	The literature was added to the reference list.
60375	Jenkins, Jennifer	6	172	173		See comment above. Merely being "biogenic" is not in and of itself sufficient grounds for excluding CO ₂ emissions from wastewater treatment. Need to find another rationale for excluding these emissions.		Rejected	This theory is based on carbon neutral, and come from 2006GLs.
60376	Joosten, Hans	6	178	178		replace ";" by ":"		Rejected	This was used for explanation of the inside the black colored box. So, we decided to use it.
60377	Joosten, Hans	6	182	182		replace "provide" by "provides"		Accepted	
60378	Joosten, Hans	6	183	183		replace "domestic" by "domestic wastewater"		Accepted	

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60379	Joosten, Hans	6	183	183		replace "factor" by "factors"		Accepted	
60380	Jamsranjav, Baasansuren	6	187	187		"potential wastewater" replace with "agricultural effluent"		Accepted with modifications	"potential wastewater" was changed to "wastewater".
60381	Joosten, Hans	6	191	191		replace "" by "." at the end of the sentence.		Accepted	
60382	Garneau, Michelle	6	191			in section 6.3 ... remove "		Accepted	
60383	Joosten, Hans	6	193	194		replace "MCF" by "Methane Conversion Factor (MCF)" because this abbreviation has not yet been used.		Accepted with modifications	We added "Methane Correction Factor (MCF)" to former one.
60384	Jamsranjav, Baasansuren	6	193	194		CH4 emissions from runoff from agricultural land is negligible- This needs to be explained and supported by the reference		Accepted with modifications	This table was revised. Then, "collected runoff" could be considered as one of industrial wastewater.
60385	Jamsranjav, Baasansuren	6	193	194		The table 6.3 says "CH4 from landfill leachate is covered in the 2006 GLs" - C balance needs to be checked		Rejected	In volume 5, chapter 3 in 2006GLs, the amount of DOC leached from the SWDS is not considered because the amounts of DOC lost with the leachate are less than 1 percent and can be neglected in the calculations. We followed this theory.
60386	Joosten, Hans	6	199	199		to which the waste generate CH4: unclear and incorrect phrasing...		Accepted with modifications	

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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
60387	Joosten, Hans	6	212	212		replace "system" by "systems"		Accepted	
60388	Joosten, Hans	6	214	214		skip "Constructed wetlands can be operated under anaerobic and aerobic conditions. But" redundant		Rejected	We think this is thorough explanation for readers.
60389	Joosten, Hans	6	214	215		replace "CH4 generated at such facilities" by "CH4 generated by constructed wetlands"		Accepted	
60390	Jamsranjav, Baasansuren	6	241	290		Is the constructed wetlands suggested an aggregation level for key category analysis?		Rejected	The supplement is the GL for country that have CWs fell within common three types as recommend MCF in table 6.4. Country with disaggregate data more than three types can consider to use their specific data and consider to use either default value or country specific value as appropriate.
60391	Jamsranjav, Baasansuren	6	241	290		"Are constructed wetlands used for wastewater treatment" instead of "Are data on wastewater treatment in CW available"		Accepted with modifications	
60392	Joosten, Hans	6	312	312		replace "Bo" by Bo"		Accepted	
60393	Jamsranjav, Baasansuren	6	316	317		It would be good if an explanation on how these default MCFs are derived is provided.		Accepted	Literatures were listed.

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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
60394	Jamsranjav, Baasansuren	6	318	325		Are the factors (VCF and TCF) taken into account in deriving the default MCFs?		Accepted with modifications	VCF and TCF were removed responding to the other comments. The MCF values are derived based on actual measurement data and thus the operating and environmental conditions such as vegetation types and temperature effect have been taken into account.
60395	Joosten, Hans	6	320	320		replace "Aerenchyma is an air channel in the root" by "Aerenchyma are air conducting tissues in the roots, stems and leaves"		Accepted with modifications	Thank you. But the sentence was deleted.
60396	Joosten, Hans	6	321	321		replace "between the shoot and the root" by "between the root zone and the atmosphere"		Accepted with modifications	That's better. But the paragraph was deleted.
60397	Joosten, Hans	6	327	327		replace "Anaerobic condition generally occurred" by "Anaerobic conditions generally occur"		Accepted with modifications	Thank you. But the sentence was deleted.
60398	Troxler, Tiffany	6	328	329		It is stated that this method applies to natural and coastal wetlands. Under what conditions? Can we have further clarification? In the coastal wetlands chapter at least, there are quite a lot of new data available for coastal wetlands that might be more appropriate especially since those fluxes are from soils and these are using BOD in water column.		Accepted with modifications	These sentences were deleted as indicated.
60399	Joosten, Hans	6	366	367		unclear/incorrect phrasing		Accepted	There are some comments about this sentence. We revised as suggested.

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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
60400	Joosten, Hans	6	370	370		add "wetlands after "constructed"		Accepted	
60401	Joosten, Hans	6	375	375		replace "provides" by "provide"		Accepted	
60402	Joosten, Hans	6	379	379		skip "is"		Accepted with modifications	"that is treated" was used instead of deleting "is".
60403	Joosten, Hans	6	386	386		skip "might be difficult to quantify"		Accepted	
60404	Joosten, Hans	6	387	388		replace "that involved in gas exchange due to thiers physical structure of Aerenchyma" by especially with respect to the relevance of gas exchange via aerenchyma"		Accepted with modifications	This part was deleted.
60405	Joosten, Hans	6	393	393		skip "Below,"		Accepted	
60406	Joosten, Hans	6	404	404		replace "Although" by "As"		Accepted	
60407	Joosten, Hans	6	448	448		replace "generate" by "generates"		Accepted with modifications	This part was deleted.
60408	Garneau, Michelle	6	455			Tier 1		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60409	Joosten, Hans	6	461	461		replace "The methodology was provided assuming typical vegetation harvesting practice condition." by "The methodology provided assumes typical vegetation harvesting practice."		Accepted	
60410	Joosten, Hans	6	465	465		skip "also" (is already covered by "the same"		Accepted	
60411	Jamsranjav, Baasansuren	6	484	515		Tier 3 is not included in the decision tree		Accepted	Tier 3 was added to the decision tree.
60412	Jamsranjav, Baasansuren	6	484	515		"Are constructed wetlands used for wastewater treatment" instead of "Are data on wastewater treatment in CW available"		Accepted with modifications	We revised as follows. "Is CW used for wastewater treatment in the country?".
60413	Joosten, Hans	6	518	518		replace "literatures" by "literature"		Accepted	
60414	Garneau, Michelle	6	518			literature(s)		Accepted	
60415	Joosten, Hans	6	519	519		replace "They" by "The values"		Accepted	
60416	Garneau, Michelle	6	530	532		Equation 6.6 : N EEFLUENT		Accepted	
60417	Joosten, Hans	6	532	532		replace "EEFLUENT" by "EFFLUENT"		Accepted	
60418	Garneau, Michelle	6	556			Samokhin (1986): not in the references		Accepted	The literature was added to the reference list.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	Supplementary documents	Authors' Action	Authors' note
60419	Jamsranjav, Baasansuren	6	566	567		Uncertainty estimates for default EF should be a percent relative to the mean value (95% confidence interval)		Rejected	We followed the same manner of chapter 6, volume 5 in the IPCC 2006GLs.
60420	Garneau, Michelle	6	595	596		The reference is not in the text		Accepted with modifications	Checked and corrected.
60421	Garneau, Michelle	6	597	599		The reference is not in the text		Accepted with modifications	Checked and corrected.
60422	Garneau, Michelle	6	600	601		The reference is not in the text		Accepted with modifications	Checked and corrected.
60423	Garneau, Michelle	6	602	603		The reference is not in the text		Accepted with modifications	Checked and corrected.
60424	Garneau, Michelle	6	607	608		The reference is not in the text		Accepted with modifications	Checked and corrected.
60425	Garneau, Michelle	6	609	610		The reference is not in the text		Accepted with modifications	Checked and corrected.

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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
60426	Garneau, Michelle	6	613	614		The reference is not in the text		Accepted with modifications	Checked and corrected.
60427	Garneau, Michelle	6	615	616		The reference is not in the text		Accepted with modifications	Checked and corrected.
60428	Garneau, Michelle	6	617	618		The reference is not in the text		Accepted with modifications	Checked and corrected.
60429	Garneau, Michelle	6	619	620		The reference is not in the text		Accepted with modifications	Checked and corrected.
60430	Garneau, Michelle	6	621	623		The reference is not in the text		Accepted with modifications	Checked and corrected.
60431	Garneau, Michelle	6	624	625		The reference is not in the text		Accepted with modifications	Checked and corrected.
60432	Garneau, Michelle	6	628	629		The reference is not in the text		Accepted with modifications	Checked and corrected.

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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
60433	Garneau, Michelle	6	630	631		The reference is not in the text		Accepted with modifications	Checked and corrected.
60434	Garneau, Michelle	6	632	634		The reference is not in the text		Accepted with modifications	Checked and corrected.
60435	Garneau, Michelle	6	632	634		Verify the name (Löhmus), not the same in the references (Löhmus)		Accepted	We checked. It might be the issue of language.
60436	Garneau, Michelle	6	643	644		The reference is not in the text		Accepted with modifications	Checked and corrected.
60437	Garneau, Michelle	6	645	646		The reference is not in the text		Accepted with modifications	Checked and corrected.
60438	Garneau, Michelle	6	649	650		The reference is not in the text		Accepted with modifications	Checked and corrected.
60439	Garneau, Michelle	6	651	652		The reference is not in the text		Accepted with modifications	Checked and corrected.

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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
60440	Garneau, Michelle	6	653	654		The reference is not in the text		Accepted with modifications	Checked and corrected.
60441	Garneau, Michelle	6	659	660		The reference is not in the text		Accepted with modifications	Checked and corrected.
60442	Garneau, Michelle	6	664	665		The reference is not in the text		Accepted with modifications	Checked and corrected.
60443	Garneau, Michelle	6	669	670		The reference is not in the text		Accepted with modifications	Checked and corrected.
60444	Garneau, Michelle	6	671	673		The reference is not in the text		Accepted with modifications	Checked and corrected.
60445	Garneau, Michelle	6	674	675		The reference is not in the text		Accepted with modifications	Checked and corrected.
60446	Garneau, Michelle	6	676	677		The reference is not in the text		Accepted with modifications	Checked and corrected.

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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
60447	Garneau, Michelle	6	678	679		The reference is not in the text		Accepted with modifications	Checked and corrected.
60448	Garneau, Michelle	6	680	681		The reference is not in the text		Accepted with modifications	Checked and corrected.
60449	Garneau, Michelle	6	690	691		The reference is not in the text		Accepted with modifications	Checked and corrected.
60450	Garneau, Michelle	6	692	693		The reference is not in the text		Accepted with modifications	Checked and corrected.
60451	Garneau, Michelle	6	694	695		The reference is not in the text		Accepted with modifications	Checked and corrected.
60452	Garneau, Michelle	6	696	697		The reference is not in the text		Accepted with modifications	Checked and corrected.
60453	Garneau, Michelle	6	700	702		The reference is not in the text		Accepted with modifications	Checked and corrected.

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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
60454	Garneau, Michelle	6	703	704		The reference is not in the text		Accepted with modifications	Checked and corrected.
60455	Hunt, Patrick G	6	Figure 6.3			There should be an arrow connecting the liquid portion of the anaerobic treatment to the constructed wetlands.		Rejected	We know there are many types of combination as suggested, this supplement is for chapter 6, volume 5 in the IPCC 2006GLs. Then, we followed figure 6.1 of chapter 6, volume 5 in the IPCC 2006GLs.
60456	Joosten, Hans	6	general			the chapter contains various grammatical mistakes and could benefit from a thorough check by an informed native speaker. I did not look at that intensively.		Accepted	
60457	Hunt, Patrick G	6	general			This chapter is a good and timely contribution. The connection to previous IPCC versions and the relation of the wastewater components are quite understandable and helpful.		Accepted	Thank you!

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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
60458	Troxler, Tiffany	6	Table 6.3			It is not yet clear if this chapter addresses runoff or leaching from agricultural activities that cause nutrient enrichment in natural wetlands. The Table suggests that this is not covered in either this chapter or the 2006 GLs. If this is indeed accurate (that Chapter 6 and previous GLs do not cover runoff/leaching to natural wetlands from agricultural runoff), then Table 6.3 (with further clarification in text) should direct inventory compilers to Chapters 3, 4, or 5 depending on the wetland type and management. For instance, runoff from agricultural land does not result in negligible CH ₄ emissions AND N ₂ O is not appropriately covered for these wetland types in the 2006GLs. Please work with other authors to ensure there are no omissions in coverage with regard to nutrient enrichment in natural wetlands.		Accepted with modifications	This table was revised. Then, "collected runoff" could be considered as one of industrial wastewater.