

Working Group III contribution to the IPCC Fifth Assessment Report
 List of Substantive Edits to the Final Published Report

This document is intended to cover all substantive edits that were made to the Chapters, Annexes or the Technical Summary of Working Group III's contribution to the IPCC Fifth Assessment Report since the Final Government Distribution on 17 December 2013. The changes listed have been introduced in order to clarify statements, correct mistakes, and/or ensure consistency across chapters and summaries. In addition, missing and/or incomplete references have been included or updated throughout the volume. However, the list might not be fully comprehensive and copy edits are generally not part of this list. This final version of the Substantive Edits List needs to be read alongside the final, published report available at www.mitigation2014.org.

Ch.	Page	From Line	To Line	Amendment	Reason for Amendment
1	3	29	29	diplomatic' replaced by 'policy'	Clarification
1	3	29	29	Text inserted 'For example, a..'	Error Correction
1	3	36	38	Deleted text 'an all time high of', replaced with ', which is higher than any level prior to that date.' at the end of sentence	Error Correction
1	3	47	48	Text deleted 'These factors also determine the choice of energy sources as well as the overall efficiency of the energy system.'	Error Correction
1	4	11	11	Text deleted 'probably'	Error Correction
1	4	17	17	Inserted text 'physical'	Clarification
1	4	18	18	might affect levels of mitigation in' amended to read 'that affect how...'	Error Correction
1	8	8	8	Deleted 'physically'	Error Correction
1	8	15	15	Add 'change' between 'climate' and 'mitigation'	Consistency
1	8	21	21	Inserted text 'tailored for the purpose of mitigation'	Clarification
1	8	35	35	Inserted text 'in the wake of the global financial crisis'	Clarification
1	9	12	12	OECD replaced by 'high income countries'	Error Correction
1	9	15	15	except replaced by 'with few exceptions such as'	Error Correction
1	9	22	22	Y-axis label of right-panel amended to remove 'average'.	Clarification
1	10	12	12	Inserted 'other'	Clarification
1	10	27	27	embedded' replaced with 'embodied'	Consistency
1	10	29	29	geographical' replaced with 'territorial'	Consistency
1	11	21	21	Text inserted 'Relatively expensive energy will, as well, encourage conservation and efficiency'	Clarification
1	11	27	27	fuel' replaced by 'catalyze'	Clarification
1	12	3	3	IEA, 2012d deleted	Error Correction
1	12	22	22	would be' replaced by 'is'	Error Correction
1	13	41	41	are' replaced by 'can be'	Error Correction
1	14	17	17	goals' replaced by 'targets'	Consistency
1	14	20	20	Sentence amended to read 'in tandem, governments made an array of pledges that they solidified at the 2010 COP meeting in Cancun. These 'Cancun pledges' concern '	Consistency
1	14	34	34	Text inserted 'originally listed in Annex B of the Kyoto Protocol '	Clarification
1	15	27	27	Deleted repeated text 'and rising trade in embodied emissions.'	Error Correction
1	16	7	7	inserted text 'international'	Clarification
1	16	8	8	is' replaced by 'might be'	Error Correction
1	16	9	9	Delete 'climate'	Consistency
1	16	21	21	Sentence amended to read '...mitigation efforts flexibly across different substances.'	Clarification
1	17	11	11	Text inserted 'We do not show warming agents that are not included in the Kyoto Protocol, such as black carbon.'	Clarification
1	17	19	9	Table 1.1 2nd row, rightmost column amended to read 'Working Group I (20 and 100 year from AR5 & 500 year from AR4)	Error Correction
1	17	19	20	Table 1.1 value for F-gases in 1000 year GWP value changed from 2.1% to 2.2%. Corrected due to rounding error.	Error Correction
1	20	2	5	Caption amended for consistency with TS to read "Allocation of GHG emissions in 2010 across the five sectors examined in detail in this report (see chapters 7-11). Pullout from panel A allocates indirect CO2 emission shares from electricity and heat production to the sectors of final energy use. Panel B (top right): Shares (in %) of direct and indirect emissions in 2010 by major economic sectors with CO2 emissions from electricity and heat production allocated to the sectors of final energy use"	Consistency
1	20	6	6	Emissions by gas since 1970' amended to read 'Total annual GHG emissions by groups of gases 1970-2010'	Consistency
1	20	7	11	Text replaced to read "The uncertainty ranges provided by the whiskers for 2010 are illustrative given the limited literature on GHG emission uncertainties"	Consistency
1	20	14	14	Text inserted 'from anthropogenic emissions sources in'	Error Correction
1	21	22	23	Deleted text 'and weighting with 100 year GWPs as presently used for the uN Climate Convention and Kyoto Protocol (Table 1.1) repetition from above.	Error Correction
1	21	22	24	Sentence 'Looking at the total...about 2%. Moved to end of paragraph	Consistency
1	21	24	24	Inserted text 'of greenhouse gases'	Clarification

1	22	4	8	Text deleted 'Present global greenhouse gas emissions....13% and 7% respectively (Figure 1.3a) as repetition.	Error Correction
1	23	4	5	Text replaced to read "Inset shows trends in annual per capita mean (solid lines) and median (dotted lines) GHG emissions by region 1970–2010 in tonnes of CO ₂ eq (t/cap/yr) "	Consistency
1	23	4	6	Caption amended for consistency with TS to read "Inset shows trends in annual per capita mean (solid lines) and median (dotted lines) GHG emissions by region 1970-2010 in tonnes of CO ₂ eq(t/cap/yr) "	Consistency
1	24	2	6	Caption amended for consistency with TS to read "CO ₂ emissions from fossil fuel combustion for the four economic regions attributed on the basis of territory (solid line) and final consumption (dotted line) in gigatonnes of CO ₂ per year (Gt/yr).. The shaded areas are the net CO ₂ trade balance (difference) between each of the four country groupings (see figure 1.1) and the rest of the world. Brown shading indicates that the region is a net importer of emissions, leading to consumption-based CO ₂ emission estimates..."	Consistency
1	24	6	9	production' replaced by 'territory' (2 instances)	Consistency
1	24	10	11	References amended. Sentence now reads 'Figures based on Caldeira and Davis (2011) and Peters et al.(2012) but with data from Eora, a global multi-regional input-output model (Lenzen et al., 2012) and Lenzen et al., 2013)"	Error Correction
1	25	2	4	Caption amended for consistency with TS to read "Greenhouse gas emissions measured in gigatonnes of CO ₂ eq per year (Gt/yr) in 1970, 1990 and 2010 by five economic sectors (Energy supply, Transport Buildings, Industry as well as Agriculture, Forestry and Other Land Use (AFOLU)), and four economic regions (see caption to figure 1.1). 'Bunkers' refers to emissions from international transportation..."	Consistency
1	25	12	12	including' replaced by 'adjusting emissions statistics to assign'	Clarification
1	25	13	13	residential' replaced by 'buildings'	Error Correction
1	25	14	14	Percentages replaced to read '11% and 12% to reach levels of 31% (industry) and 19% (buildings)	Error Correction
1	25	24	25	Sentence amended to read "...showing that the large group of countries other than the highly industrialized nations continue to grow despite the world economic crisis.	Consistency
1	26	36	36	while economic growth rates have ben much lower' replaced by 'in some countries'.	Error Correction
1	27	1	1	Figure 1.7. Y-axis label changed to read 'Change in Annual CO ₂ Emissions by Decade...', and y-axis labels changed to begin in 1970, 1980, 1990 and 2000 respectively.	Error Correction
1	27	2	2	Deleted text 'The 'Kaya identity' components and their effect on total emissions levels'.	Consistency
1	27	2	5	Caption amended for consistency with TS to read "Decomposition of decadal absolute changes in global energy-related CO ₂ emissions by Kaya factors; population (blue), GDP per capita (red), energy intensity of GDP (green) and carbon intensity of energy (purple)..."	Consistency
1	27	3	4	Text further amended to read "Decomposition of the change in total annual CO ₂ emissions from fossil fuel combustion by decade and four driving factors;..."	Consistency
1	27	6	6	decadal replaced with 'emission'	Consistency
1	27	6	7	Beginning of sentence reworded to read "The change in emissions over each decade is measured in gigatonnes of CO ₂ per year [GtCO ₂ /yr];..."	Consistency
1	27	16	26	Text deleted as repetition 'So far, while....barely chanded from 1990 to 2010 (88% and 86% respectively) (IEA, 2012b).	Error Correction
1	28	44	44	Text deleted 'mainly'	Consistency
1	31	2	3	Figure 1.8d. Y-axis label on both main figure changed to be: GHG Emission	Error Correction
1	31	7	7	Add 'change' between 'climate' and 'mitigation'	Consistency
1	31	9	9	Production' replaced by 'territory'	Consistency
1	31	18	18	solid lines showing the median and diamonds for the mean' changed to 'horizontal bars identify the median and diamonds the mean'	Clarification
1	31	20	20	Text inserted 'as well as (inset) for the four groupings of countries Shadings show the 10th to 90th percentile range (light) as well as the 25th to 75th percentile range (dark); horizontal bars identify the median and diamonds the mean. Country names are abbreviated using the three letter standardization maintained by the International Organization for Standardization (ISO, standard 3166).'	Clarification
1	31	23	23	Reference inserted 'Hohne et al, 2011'	Error Correction
1	31	24	25	Caption amended to read "...high and low plausible values for land use emissions are two different datasets provided in the MATCH analysis."	Clarification
1	32	5	5	Sentence amended to read 'A fifth perspective is the carbon efficiency of different economies.'	Clarification
1	32	12	12	Text inserted 'This shift also often includes a change from higher carbon primary fuels to less carbon-intensive fuels. '	Clarification
1	33	24	25	Second half of sentence amended to read "...the atmosphere by natural processes since those processes are not perfectly understood'	Clarification
1	33	38	38	Text deleted '(right inset)'	Error Correction
1	33	38	38	Text inserted 'Because it is practically difficult to orient policy around very long term goals.'	Error Correction

1	33	40	43	Text shifted to below following paragraph.	Clarification
1	34	11	11	Copenhagen' replaced by 'Cancun'	Consistency
1	34	15	15	Text inserted 'The middle inset in figure 1.9 shows those pledges and suggests that they may be consistent with some scenarios that stabilize concentrations at around 550ppm CO2-eq but are inconsistent with the least cost scenarios that would stabilize concentrations at 450ppm CO2-eq.'	Error Correction
1	34	16	16	Text inserted 'That point is illustrated in the upper right inset which shows how assumptions about the timing of mitigation and the availability of technologies affects a subset of scenarios that stabilize concentrations between 450ppm CO2-eq and 550ppm CO2-eq. Least cost, optimal scenarios depart immediately from BAU trajectories. However, such goals can be reached even if there are delays in mitigation over the next two decades provided that new technologies become available that allow for extremely rapid reductions globally in the decades immediately after the delay.'	Clarification
1	34	28	28	Text inserted 'global'	Clarification
1	34	32	32	Replace 'sequestration' by 'dioxide capture and storage'	Consistency
1	34	48	48	Text inserted 'Some models also allow for an 'overshoot' of peak concentrations, which makes it easier for the model to reach long-term stabilization but lowers the odds that stabilization will limit actual warming to a particular target.'	Clarification
1	35	1	1	legend in right inset amended to switch 'with delays' and 'without delays'	Error Correction
1	35	9	9	left inset' changed to 'bottom left inset'	Clarification
1	35	10	10	middle inset' changed to 'top left inset'	Clarification
1	35	11	20	Text amended to read "The bottom left inset shows recent historical emissions and is the same as Figure 1.3c. The top left inset shows the same scenarios from the main figure, but with more detail over the next few decades, including the relationship between the Cancun pledges and the various stabilization scenarios. The top right panel looks instead at long-term patterns in emissions and explores the effects of delays to 2030. It focuses on a subset of the mitigation scenarios from the main panel that are consistent with limiting atmospheric concentrations of CO2 to about 450 ppm CO2eq to 500 ppm CO2eq – a goal broadly consistent with limiting warming to about 2 degrees above pre-industrial levels by 2100 and thus a topic that many models have examined in some detail. The dark green fans show model estimates for optimal least cost strategies for stabilization; light green fans show least cost mitigation with emissions that track baseline scenarios until 2030 and then make deep cuts with the assumption that new technologies come into place. Chart also shows in light black a subset of scenarios based on the premise that very large quantities of net negative emissions (about 40 GtCO2eq/yr by 2100) can be achieved and thus illustrate how assumptions of negative emissions technology may influence the expected time path of emissions. The black scenarios, the output of just one model, entail substantial overshoot of concentrations before stabilization is achieved and unlikely to limit warming to 2 degrees (see Chapter 6)"	Clarification
1	35	19	19	middle inset' changed to 'top left inset'	Clarification
1	35	20	20	Copenhagen' changed to 'Cancun'	Error Correction
1	36	22	22	Text inserted '(These low EI scenarios are shown, as well, in purple on Figure 1.9—they lead, systematically, to emissions that are significantly lower than standard BAU scenarios.)'	Clarification
1	36	29	29	Data corrections in Figure 1.10 in line with changes to Figure 6.24	Error Correction
1	37	18	19	Text amended to read "...cover eight broad areas of development that span eradicating extreme poverty and hunger, reducing child mortality, combating HIV/AIDS, malaria and other diseases. Within those broad areas the MDGs include 18 specific targets."	Clarification
1	37	39	39	Text inserted (See Section 3.6)'.)	Consistency
1	39	22	22	Add 'change' between 'climate' and 'mitigation'	Consistency
1	40	30	30	at the global level' replaced by 'with emissions'	Clarification
1	40	31	31	In turn, that will require closer attention to' replaced by 'Achieving those changes will require closer attention to policies that affect...'	Clarification
1	40	33	33	Delete 'carbon'	Consistency
1	40	34	36	Sentence amended to read 'Many studies have looked in detail at how this diversity of technology policy approaches might influence emissions and climate policy in the future '	Clarification
1	40	38	41	Paragraph amended to read 'Thus policy options are particularly focused on how to create credible assurances for investors who pay these capital costs. Policies that reduce demand for energy—notably those that mobilize investments in energy efficiency in both end use and supply—can play pivotal roles by limiting the total cost needed to transform energy supplies. The rate at which these changes in energy systems can occur is an important area of research. The high fixed cost of infrastructures also create 'lock-in' effects that help explain why it is difficult to change real world emission patterns quickly '	Clarification
1	41	11	11	Text inserted ', behavioural changes that allowed for greater.'	Clarification
1	41	26	26	Delete 'climate'	Consistency
1	41	34	34	Text inserted 'about'	Error Correction
1	41	34	34	Text inserted 'global'	Clarification

1	42	15	15	Text inserted 'varied'	Clarification
1	42	34	36	Text deleted "energy systems...in human health"	Consistency
1	42	43	44	Text deleted 'without yet evaluating...social welfare.'	Consistency
1	43	13	13	one fifth' replaced by 'one quarter'	Error Correction
1	43	27	27	Add 'change' between 'climate' and 'mitigation'	Consistency
1	46	36	36	New reference (Caldeira & Davis, 2011) inserted in list.	Error Correction
1	54	9	9	New reference (Lenzen et al, 2013) inserted in list	Error Correction
2	10	22	24	Paragraph merged into previous paragraph.	Consistency
2	10	46	46	"Temperature" changed to "Temperature change".	Clarification
2	13	31	31	Delete "left to our own devices".	Consistency
2	14	1	1	Delete "because disasters are few and far between".	Consistency
2	35	30	37	Delete paragraph.	Error correction
2	36	10	16	Replace paragraph by "Ensembles of model runs generated by different models, called multimodel ensembles or super-ensembles convey the scatter of the climate response and natural internal climate variability around reference scenarios as sampled by a set of models, but cannot be interpreted probabilistically without an assessment of model biases, model interdependence, and how the ensemble was constructed (see AR5 WGI Section 12.2; Knutti et al., 2010). In many cases the assessed uncertainty is larger than the raw model spread, as illustrated in AR4 Figure SPM.5 [[refer here to your figure number]]. The shaded areas (+/- one standard deviation) around the time series do not imply that 68% certain to fall in the shaded areas, but the modelers' assessed uncertainty (likely ranges, vertical bars on the right) are larger. These larger ranges reflect uncertainty in the carbon cycle and the full range of climate sensitivity (AR4 WGI Section 10.5.4.6 and Box 10.3; Knutti et al., 2008) but to do not reflect other possible sources of uncertainty (e.g., ice sheet dynamics, permafrost, or changes in future solar and volcanic forcings). Moreover, many of these models have common ancestors and share parameterizations or code (Knutti et al., 2013) creating dependences between different model runs. Probability statements on global surface warming require estimating the models' bias and interdependence (see AR5 WGI Sections 12.2 and 12.4.1.2). AR5 WGI assigns likelihood statements (calibrated language) to global temperature ranges for the RCP scenarios (AR5 WGI Table SPM.2) but does not provide probability density functions (PDFs), as there is no established formal method to generate PDFs based on results from different published studies."	Consistency
2	36	Figure 2.4		Replace with Figure SPM.5 from WGI AR4 including caption.	Consistency
2	42	Table 2.2		Delete second row.	Error correction
3	6	3	3	Add "when they are aggregated to derive ethical conclusions" before bracket.	Clarification
3	7	19	19	Add "This suggests that such damage functions should be used with caution and that there may be significant value in undertaking research to improve the precision of damage estimates" before bracket and "3.12" within.	Clarification
3	12	16	22	Replace first three sentences by "From the perspective of countries rather than individuals or groups of individuals, historic emissions can help determine causal responsibility for climate change (den Elzen et al., 2005; Lamarque et al., 2010; Höhne et al., 2011). Many developed countries are expected to suffer relatively modest physical damage and some are even expected to realize benefits from future climate change (see Tol, 2002a; b). On the other hand, some developing countries bear less causal responsibility, but could suffer significant physical damage from climate change (IPCC, 2007 WG II AR4 SPM)."	Clarification
3	14	20		Add footnote "Specifically, Article 3 of the UNFCCC includes the sentence: "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."	Clarification
3	55	6		Add "the original versions of" before PAGE.	Clarification
4	5	36		often arise' replaced by 'are often invoked'	Clarification
4	15	4		Inserted clarifying sentence on origin of figure.	Clarification
4	20	14		Replaced 'vested multiple' with 'multiple vested'	Clarification
4	25	23	26	Need to change IEA, 2013 reference to IEA, 2012 as the WEO 2013 was published after our cut-off date. As a consequence, the associated number of people without access to electricity changed from 1.4 billion in 2010 (IEA, 2013) to 1.3 billion in 2010 (IEA, 2012).	Error Correction
4	106	22	23	Completed reference to read: Shalizi Z., and F. Lecocq (2014). The economics of targeted mitigation in infrastructure. Climate Policy 14, Issue 2, 187 – 208.	Consistency
5	4	9	9	Replace "28 to 49" by "27 (±3.2) to 49 (±4.5)".	Error correction
5	4	10	10	Replace ", reaching the highest value in human history" by "; GHG emissions during the last decade of this period were the highest in human history".	Clarification
5	4	11	11	Change 2.3% to 2.2% (As per slight methodology change decided upon by TSU and CLAs in December while editing TS)	Consistency
5	4	11	11	Change 1.4% to 1.3%	Consistency
5	4	13	13	Changed "The share of fossil-fuel related..." to "Fossil-fuel related...".	Error Correction
5	4	16	16	Insert "second-largest" before "contributors".	Clarification
5	5	30	30	Insert "rate" after "population growth"	Clarification

5	6	27	31	Replace by "Co-benefits may be particularly important for policymakers because the benefits can be realized faster than can benefits from reduced climate change, but they depend on assumptions about future trends (medium evidence, high agreement). Policies addressing fossil fuel use may reduce not only CO2 emissions but also sulphur dioxide (SO2) emissions and other pollutants that directly affect human health, but this effect interacts with future air pollution policies. Some mitigation policies may also produce adverse side-effects, by promoting energy supply technologies that increase some forms of air pollution."	Clarification
5	7	5	5	Changed "GHG concentration" to "CO2-concentration".	Clarification
5	8	17	17	Replaced "more profound" by "deeper".	Clarification
5	9	11	11	Replace "28" by "27".	Error correction
5	9	13	13	Change "annualized" to "average annual".	Consistency
5	9	14	14	Change "2.5%, 1.5%, 0.7%, and 2.3%" to "2.0%, 1.4%, 0.6%, and 2.2%"	Consistency
5	9	14		Insert footnote "Note that there are different methods to calculate the average annual growth rate. Here, for convenience of the reader, we take the simple linear average of the annual growth rates g_t within the period considered".	Clarification
5	10	2	4	Revised to "Left panel: GHG emissions per region over 1970 – 2010. Emissions include all sectors, sources and gases, are territorial (see Box 5.2), and aggregated using 100-year GWP values."	Clarification
5	11	2	4	Revised to "Upper-left panel: CO2 emissions per region over 1750 – 2010, including emissions from fossil fuel combustion, cement production, and gas flaring (territorial, Boden et al., 2012). Lower-left panel: an illustrative estimate of CO2 emissions from AFOLU over 1750 – 2010 (Houghton et al., 2012). Right panels show cumulative CO2 emissions over selected time periods by region".	Clarification
5	11	14	14	Changed "660" to "680" and "290" to "300".	Error Correction
5	11	14	14	Deleted "/year" in two instances.	Error Correction
5	14	14	14	Changed "10 %" to "8 %".	Error Correction
5	15	2	6	Revised to "Upper panels: five estimates of CO2 emissions for the three countries with the largest emissions (and complete time series), including fossil fuel combustion, cement production, and gas flaring. Middle panels: the three countries with the largest percentage variation between estimates. Lower panel: global emissions (MtCO2). Emissions data are harmonized data from Macknick (2011; downloaded Sept 2013), IEA (2012) and JRC / PBL (2013)."	Clarification
5	16	5		Insert footnote "HCFC-22 is regulated under the Montreal Protocol but not included in fluorinated gases totals reported in this Chapter as it is not included in the Kyoto Protocol."	Clarification
5	19	16	18	Revised to "Territorial GHG emissions per region over 1970 – 2010. Note that only the bottom-right panel for the World has a different scale for its vertical axis. Fossil energy CO2 indicates emissions from fossil fuel combustion. Emissions are aggregated using 100-year GWP values. Data from JRC / PBL (2013) and IEA (2012). Regions are defined in Annex II.2 The direct emission data from JRC / PBL (2013) (see Annex II.9) represents land-based CO2 emissions from forest and peat fires and decay that approximate to CO2 flux from anthropogenic emission sources in the FOLU sub-sector."	Clarification
5	19	24	24	"Two approaches to GHG accounting"	Clarification
5	21	14	16	Revised to "Four factor decomposition of territorial CO2 emission from fossil fuel combustion at regional level over 1970 – 2010. Note that only the bottom-right panel for the World has a different scale for its vertical axis. Data from IEA (2012) and JRC / PBL (2013); based on PPP-adjusted GDP. Regions are defined in Annex II.2."	Clarification
5	22	11	12	Revised to "Three factor decomposition of consumption-based and territorial CO2 emission from fossil fuel combustion for Asia (left) and OECD (right) over 1990 – 2010. Data from IEA (2012) and JRC / PBL (2013). Regions are defined in Annex II.2."	Clarification
5	23	2	3	Revised to "Regional trajectories of territorial CO2 emissions from fossil fuel combustion versus GDP over 1970 – 2010. Data from IEA (2012) and JRC / PBL (2013). Regions are defined in Annex II.2."	Clarification
5	30	4	4	"2% and 5%" replaced by "2%, 4% and 6%".	Error Correction
5	34	29	31	Revised to "Historical trend (1971 – 2010) by region in per capita primary energy (left panel), and primary energy intensity of GDP (right panel), against GDP per capita on the horizontal axis. Grey diagonals connect points with constant energy intensity (left panel) and constant per capita primary energy use (right panel). Note that both axes are logarithmic. Source: IEA (2012); UN WPP (2012); World Bank (2012). Regions are defined in Annex II.2."	Clarification
5	35	12	13	Delete "using by proxy GDP per capita".	Clarification
5	45	4	6	Revised to "Direct emissions from industry (excluding waste / waste water and AFOLU contributions ¹⁰) grew from 5.4 GtCO ₂ eq / yr in 1970 to 8.8 GtCO ₂ eq / yr in 2010. The contribution of OECD countries dominated these emissions at the start of the period with over 57 % of the total but declined to 24 % of the total in 2010."	Clarification
5	45	8	8	Changed "165%" to "very significantly".	Consistency
5	47	22		Revised to "Territorial GHG emissions per sector in LDCs over 1970 – 2010 aggregated using 100-year GWP values."	Error Correction
5	64	43	43	Changed "50" to "49" to make it consistent with the Executive Summary.	Consistency

6	1			in entire chapter references were checked and if needed corrected, mostly this is checking whether year of publication has been correct for recent publications, correct spelling of authors, full author lists and completeness of references, etc.	Error Correction
6	5	1	1	Inserted cross-references to each paragraph of the Executive Summary.	Clarification
6	5	17	19	changed "and more possibilities for delays in global mitigation and fragmented international action." to "and more possibilities for delays in additional global mitigation beyond that of today and fragmented international action."	Clarification
6	5	37		added after "WGI": "provides estimates of the temperature implications of different emissions pathways. This assessment"	Clarification
6	5	41	41	Replaced 'GHG' with 'atmospheric'	Error Correction
6	5	45	45	Replaced "zero or below" by "near or below zero"	Clarification
6	6	9	9	added "among" before "the last sectors"	Clarification
6	6	10	10	deleted "high confidence"	Consistency
6	6	14	14	added "by themselves" before "to constrain"	Clarification
6	6	21	22	replaced "To put these losses in context, studies assume increases in consumption from four-fold to over ten-fold over the century without mitigation." with ". These consumption losses correspond to an annual average reduction of consumption growth by 0.06 to 0.20 percentage points from 2010 to 2030 (median of 0.09), 0.06 to 0.17 percentage points through 2050 (median of 0.09), and 0.04 to 0.14 percentage points over the century (median of 0.06). To put these losses in context, studies assume annual average consumption growth rates without mitigation between 1.9% and 3.8% per year until 2050 and between 1.6% and 3.0% per year over the century. These growth rates correspond to increases in total consumption from roughly four-fold to over ten-fold over the century."	Clarification
6	6	32		added after "Studies": "exploring effort-sharing frameworks in the context of a global carbon market "	Clarification
6	6	40		changed "in mitigation" to "in additional mitigation relative to what would be most cost-effective"	Clarification
6	6	44	44	Replaced "delaying mitigation" with "delaying additional mitigation"	Clarification
6	6	45	45	replaced "do delays" by "delaying only"	Clarification
6	7	9	16	Deleted repetition of uncertainty statement in body of text.	Clarification
6	7	17		Replaced "There is only limited evidence on the potential" with "There is uncertainty about the potential"	Clarification
6	7	28	28	Added "carbon capture and storage" before "CCS".	Consistency
6	7	37	37	Replaced terminology "risk trade offs" with "adverse side effects" for consistency reasons	Clarification
6	8	43	43	Replaced "transformation" with "mitigation"	Consistency
6	9	7	7	Replaced "transformation" with "mitigation"	Consistency
6	9	20	21	deleted ERL and van Vliet references	Error Correction
6	9	23	24	Changed "action" to "mitigation" in Table 6.1.	Clarification
6	10	9	11	replaced "This include EMF 27, ADAM, RECIPE and AMPERE" with "The large model intercomparison studies include Energy Modeling Forums (EMF) 27 (Krey et al., 2014; Kriegler et al., 2014c), Adaptation and Mitigation Strategies: Supporting European Climate Policy (ADAM) (Edenhofer et al., 2010), Report on Energy and Climate Policy in Europe (RECIPE) (Luderer et al., 2011; Tavoni et al., 2012), and Assessment of Climate changed Mitigation Pathways and Evaluation of the Robustness of Mitigation Cost Estimates (AMPERE) (Riahi et al., 2014)."	Clarification
6	10	11	11	added "In addition to the large model intercomparison studies, a number of individual research papers and reports have explored this space, typically constrained to a single model (Kim et al., 2000; Richels et al., 2007; Calvin et al., 2009a; van Vliet et al., 2009; Krey and Riahi, 2009; Riahi et al., 2012a; Luderer G et al., 2013; Rogelj et al., 2013b)." after "(Riahi et al. 2014)."	Clarification
6	10	15	18	deleted the last two sentences of the section starting with "In addition, a number of.."	Clarification
6	10	16	16	Deleted reference to "Kim et., 2000"	Clarification
6	11	24	24	Changed "provide for" to "lead to".	Consistency
6	12	16	16	Deleted "actions" after "policy"	Clarification
6	12	29	30	Deleted sentence because URL of WGIII AR5 Scenario Database is not yet existing.	Clarification
6	13	22	22	Replaced "goals such as those associated with meeting 450 ppm CO ₂ -e goals" with "goals such as reaching 450 CO ₂ eq by 2100"	Clarification
6	15	6	8	Deleted "with median emboldened; shading reflects interquartile range (darkest), 5th – 95th percentile range (lighter), and full extremes (lightest)"	Consistency
6	15	11	13	Sources of Figure 6.1: Inserted "Historic data: ..., see Annex II.9" and reordered sources of figure 6.1 to separate sources of historic data from sources of scenario data.	Clarification
6	16	5		Fig.6.2: deleted 'Income' from the x-axis label	Error Correction
6	16	5		Figure 6.2: added reference for historic emissions	Clarification
6	16	9	11	Sources of Figure 6.2: Inserted "Historic data: JRC / PBL (2013), IEA (2012a), see Annex II.9" and reordered sources of figure 6.2 to separate sources of historic data from sources of scenario data.	Clarification
6	17	12	13	Sources of Figure 6.3: Inserted "Historic data: ..., see Annex II.9" and reordered sources of figure 6.3 to separate sources of historic data from sources of scenario data.	Clarification

6	18	1		Fig.6.4: in legend changed "Full Range" to "Max"/"Min"	Clarification
6	18	24	26	Replaced "Baseline projections for global land-related carbon emissions and sequestration are made by a smaller subset of models, and due to observation difficulties are subject to greater historical uncertainty than FF&I emissions (Pan et al., 2011; Houghton et al., 2012)." with "Baseline projections for global land-use related carbon emissions and sequestration (also referred to as net Agriculture, Forestry and Other Land Use (AFOLU) CO2 emissions) are made by a smaller subset of models. Net AFOLU CO2 emissions have greater historical uncertainty than FF&I emissions as discussed in Section 11.2 (Pan et al., 2011; Houghton et al., 2012)."	Clarification
6	18	30	30	added "relative to emissions from fossil fuels and industry" after "is small".	Clarification
6	18	32	32	added "than land CO2" after "is larger"	Clarification
6	19	2	2	Added "(based on Global Warming Potential (GWP) values for a 100-year time horizon, see Annex II.9.1)" after "emissions"; Changed "LUC" to "Net AFOLU" as only this slightly wider category fully reflects what is covered	Clarification
6	19	5		Inserted footnote on GWPs clarifying standards used and referencing further resources on GWPs in report.	Clarification
6	19	17	17	Added "the MAGICC model's median estimates of forcing as a function of aerosol emissions (for scenarios that do not project emissions of these substances, emissions were prescribed from other sources; see Annex II.10)" after "based on".	Error Correction
6	19	17	19	Deleted "scenario emissions for those models that project emissions of these substances and median forcing estimates in the MAGICC model for those that do not (see Section 6.3.2)"	Error Correction
6	20	4	4	Replaced "with median assumptions" with "the median output from the MAGICC results".	Error Correction
6	21	11	11	Added "land-use related" before "albedo".	Clarification
6	21	21	21	Added "reported in the literature" after "scenarios".	Clarification
6	21	32	32	Added "median" before "concentration".	Clarification
6	21	38	38	Replaced "it was" with "MAGICC is"	Clarification
6	21	38	39	"The CO2-e 38 concentration in 2010 is 400 ppm CO2-e based on the parameters used in this version of MAGICC." is replaced with "The CO2eq concentration in 2010 based on the parameters used in this version of E65MAGICC is roughly consistent with the 2011 radiative forcing estimate from WGI."	Clarification
6	21	43	43	added 'without full forcing information and'	Clarification
6	22	15		Table 6.2: Footnote added for "Total" (2nd last column): "Number of scenarios in the respective category, which report at least total CO2 emissions to 2100. Numbers in parentheses denote all scenarios in the respective category, including those scenarios that report only CO2 emissions (and potentially other GHGs and other radiatively active substances) from fossil fuels and industry (but not land-use CO2)."	Clarification
6	22	16	17	Added a new footnote 4 in the category total in Table 6.2: 4 Number of scenarios in the respective category, which report at least total CO2 emissions to 2100. Numbers in parentheses denote scenarios that report only CO2 emissions from fossil fuels and industry (but not land-use change)", and changed the Table accordingly.	Clarification
6	22	28	28	Replaced "This range is results from the band width of" with "This variation in CO2 budgets results from the range of".	Clarification
6	22	30	30	Added "of CO2 budgets" after "range".	Clarification
6	22	31	31	Added "for the period 2011-2100" after "estimates".	Clarification
6	22	36	36	added '-bound' to 'upper'	Clarification
6	23	4	17	Table 6.3: Footnotes: In Footnote 1, "Italicized" was added at the beginning and "equivalent" was added between "maximum concentration". ** A new footnote was added to row 1 cell 1: "The CO2eq concentration includes the forcing of all GHGs including halogenated gases and tropospheric ozone, as well as aerosols and albedo change (calculated on the basis of the total forcing from a simple carbon cycle / climate model MAGICC)." ** In footnote 2 the first "CO2" was replaced by "CO2 emissions estimates", the latter part of the sentence (starting with "emissions") was replaced with ", an amount of 515 [445 to 585] GtC (1890 [1630 to 2150] GtCO2), was already emitted by 2011 since 1870 (WGI Section 12.5). Note that cumulative CO2 emissions are presented here for different periods of time (2011 – 2050 and 2011 – 2100) while cumulative CO2 emissions in WGI AR5 are presented as total compatible emissions for the RCPs (2012 – 2100) or for total compatible emissions for remaining below a given temperature target with a given likelihood. (WGI Table SPM.3, WGI SPM.E.8)" ** Another footnote was added to row 1, column 5: "The global 2010 emissions are 31 % above the 1990 emissions (consistent with the historic GHG emission estimates presented in this report). CO2eq emissions include the basket of Kyoto gases (CO2, CH4, N2O as well as F-gases)."	Clarification

6	23	4	17	Table 6.3 continued: ** Footnote 3 (now no 5) was changed to "The assessment in WGIII AR5 involves a large number of scenarios published in the scientific literature and is thus not limited to the RCPs. To evaluate the CO2eq concentration and climate implications of these scenarios, the MAGICC model was used in a probabilistic mode (see Annex II). For a comparison between MAGICC model results and the outcomes of the models used in WGI AR5, see WGI Sections 12.4.1.2, 12.4.8 and Section 6.3.2.6 of this report. Reasons for differences with WGI AR5 SPM Table.2 include the difference in reference year (1986 – 2005 vs. 1850 – 1900 here), difference in reporting year (2081 – 2100 vs 2100 here), set-up of simulation (CMIP5 concentration-driven versus MAGICC emission-driven here), and the wider set of scenarios (RCPs versus the full set of scenarios in the WGIII AR5 scenario database here)." ** In Footnote 4 (now 6) "change" was added after the first word, before "climate system" "carbon cycle and" was added. At the end the following was added: "The temperature data compared to the 1850 – 1900 reference year was calculated by taking all projected warming relative to 1986 – 2005, and adding 0.61 °C for 1986 – 2005 compared to 1850 – 1900, based on HadCRUT4, as also applied in WGI Table SPM.2."	Clarification
6	23	4	17	Table 6.3 continued: ** Another footnote was added to row 1 (top), last column: "Temperature change is reported for the year 2100, which is not directly comparable to the equilibrium warming reported in WGIII AR4 (see Table 3.5; see also Section 6.3.2). For the 2100 temperature estimates, the transient climate response (TCR) is the most relevant system property. The assumed 90 % range of the TCR for MAGICC is 1.2 – 2.6 °C (median 1.8 °C). This compares to the 90 % range of TCR between 1.2 – 2.4 °C for CMIP5 (WGI Section 9.7) and an assessed likely range of 1 – 2.5 °C from multiple lines of evidence reported in the WGI AR5 (Box 12.2 in Section 12.5)." ** A further footnote was added to row 5 and row 7 column 5: "The high estimate is influenced by multiple scenarios from the same model in this category with very large net negative CO2eq emissions of about 40 GtCO2eq / yr in the long term. The higher bound CO2eq emissions estimate, excluding extreme net negative emissions scenarios and thus comparable to the estimates from the other rows in the table, is about 81 % in 2050 relative to 2010."	Clarification
6	23	4		Table 6.3: In column "CO2-e emissions in 2050 relative to 2010 (%)" the numbers are now relative changes, i.e. no changes is "0%". Numbers in the column were updated accordingly	Clarification
6	23	4		Table 6.3: Inserted column "CO2-e emissions in 2100 relative to 2010 (%)"	Clarification
6	23	4		Table 6.3: Numbers changes due to recomputation and corrections in binning.	Error Correction
6	23	14	14	Replaced 'likelihood statements' with 'probabilities'	Consistency
6	24	12		Figure 6.7: Clarified that negative emissions are "net negative", also clarified this in the figure.	Clarification
6	24	12		Fig.6.7: In the upper right-hand panel changed the baseline bar to show the 10-90th percentile range (as in the left-hand panel). Previously the bar was showing the full range. Now: 49.97 - 105.83 GtCO2; slight correction to RCP pathways throughout the figure; added "net" to "negative emissions" in lower panels	Error Correction
6	25	15		Figure 6.8: In figure and caption clarified that negative emissions are "net negative"	Clarification
6	25	27	27	Added 'implementation' before 'scenarios' (twice)	Clarification
6	25	36	36	Deleted "the implications for"	Clarification
6	26	29	29	Moved 'as are the absolute emissions reductions' behind the cross-reference to the figure.	Clarification
6	26	34	35	Added 'from 2010' before 'to 2100' and deleted 'large'	Clarification
6	27	10	11	Replaced references to "Bauer et al.; Böhringer et al., 2012, p. 29; Blanford et al., 10 2014; Kriegler et al., 2014a" with "Arroyo-Curras et al., 2014; Babiker, 2005; Bauer et al., 2014; Blanford et al., 2014; Böhringer et al., 2012; Bosetti and De Cian, 2013; Kriegler et al., 2014b."	Clarification
6	27	14		Table 6.4: Correction of peak year data.	Error Correction
6	27	21	22	Replaced "Net CO2 emissions from land-use change (LUC)" with "Net AFOLU CO2 emissions (see Figure 6.5)"	Clarification
6	28	10	10	inserted "avoided deforestation" after "bioenergy"	Clarification
6	28	33	33	Replaced "different greenhouse forcers" by "them".	Clarification
6	29	5	5	Changed "this results ultimately in" to "this ultimately leads to"	Clarification
6	29	6	6	Replaced 'stringent mitigation' with 'the lower concentration'	Clarification
6	29	16	16	Added 'such as Global Warming Potentials (GWPs)' behind 'metrics'	Clarification
6	29	18	18	Added 'over time' behind 'optimization'	Clarification
6	29	20	20	Replaced 'categories' with 'classes of approaches'	Clarification
6	31	17	17	Added "In addition , the WGI estimate is derived based on only a single scenario for non-CO2 substances (RCP2.6) whereas the database assessed here considers a much wider range of non-CO2 emissions" after "time period".	Clarification
6	31	18		Fig.6.12: range of boxplot was corrected in legend (not the data) from 17/83 to 16/84.	Clarification

6	31	29		added references to caption ("Source: WG I AR5 (Section 12.5.4.2, Figure 12.46, TFE.8 Figure 1) and MAGICC calculations (RCP data (van Vuuren et al., 2011a), method as in Meinshausen et al., 2011c).")	Clarification
6	32	1	1	Replaced "lead to a temperature increase of 3 to 6°C" with "lead to a temperature increase of about 3 to 6°C"	Clarification
6	32	15		Fig.6.13: Changed labels in top left panel's legend: Left: title "Climate Uncertainty" and label "with" for white area and "without" for blue area; Right: labeled top with "84th" and bottom with "16th"; in panel (d) added "ppm CO2eq" in each legend row	Clarification
6	32	32	32	Deleted "for example" before "overshoot".	Clarification
6	33	8	8	Add '(that is, exceeding 580 ppm CO2eq)'	Clarification
6	33	18		After bracket inserted this footnote "In these scenarios, the cumulative CO2 emissions range between 655–815 GtCO2 from 2011 to 2050 and between 90–350 GtCO2 from 2011 to 2100. Global CO2eq emissions in 2050 are between 70% and 95% below 2010 emissions, and they are between 110% and 120% below 2010 emissions in 2100."	Clarification
6	33	23		Fig.6.14: Added "Scenario Category [ppm CO2eq]" at x-axis label in top right panel	Clarification
6	34	7	7	Added "such as those explored in this chapter" after "concentration goals".	Clarification
6	34	7	7	added "from large-scale integrated models" after "A few studies".	Clarification
6	34	8	8	Added "that is, exceeding 580 ppmv CO2eq" after "range"	Clarification
6	34	17	17	deleted "desperate" before "lack of data".	Consistency
6	34	23	23	replaced "or" by "and".	Error Correction
6	34	26	26	Replaced "the results" by "mitigation options and the resulting scenarios".	Clarification
6	34	31	32	Replace "..., a warmer climate will lead to reductions in heating demand, which would lower emissions." with "..., a warmer climate will lead to reductions in heating demand, which would lower emissions from fuels used in heating."	Clarification
6	35	4	4	replaced "reference scenario" by "baseline scenario"	Consistency
6	35	12	12	added "necessary for mitigation" after "fossil fuels".	Clarification
6	35	17		Fig.6.15: In each panel at the top changed "=" to ":" to avoid misinterpretation as a formula.	Clarification
6	35	19	19	added "between 2010 and 2100"	Clarification
6	36	1	1	Added "demand" after "end use".	Clarification
6	36	15	15	changed "electricity" to "electricity generation" with which carbon intensity is associated	Clarification
6	36	24		added at end of first caption sentence "showing the full scenario range"	Clarification
6	36	25	26	Sources of Figure 6.6: Inserted "Historic data: ..., see Annex II.9" and reordered sources of figure 6.6 to separate sources of historic data from sources of scenario data.	Clarification
6	37	3	7	Added concentration labels in caption harmonized with figure legend	Consistency
6	37	19	20	deleted "in scenarios" after "final energy use".	Clarification
6	38	11	11	Deleted "these"	Clarification
6	38	11	11	added "with limits on available technologies or variations in their cost and performance" after "scenarios".	Clarification
6	38	41	41	deleted "mitigation".	Clarification
6	38	42	42	added "pathways" after "transformation".	Clarification
6	38	43	43	changed "6.3.1.3" to "6.3.1.4".	Error Correction
6	39	11	11	Changed "among" to "across".	Clarification
6	39	22	22	added "(see below)" after "incentives".	Clarification
6	39	23	23	replace "transformation" with "mitigation"	Consistency
6	40	5	5	Added "by the following" after "indicated"	Clarification
6	40	6	6	Added 'for modern bioenergy' after 'is'.	Error Correction
6	40	12	12	changed "crop" to "cropland".	Error Correction
6	41	13	13	deleted "review" after "Chum et al. 2011".	Error Correction
6	41	32	32	replaced "the study by" by "one study".	Clarification
6	41	36	36	replaced "A number" by "Finally, a number"	Clarification
6	41	37	39	Replace: "have found that it is cost-effective to trade-off lower land carbon stocks from land-use change and increased N2O emissions" with "have suggested that it could be cost-effective to lower land carbon stocks from land-use change and increase N2O emissions"	Clarification
6	42	15	15	added "mitigation" after "net GHG"	Clarification
6	42	16	16	replace "transformation" with "mitigation"	Consistency
6	43	9		Inserted the following sentence after "mitigation.": "They can be expressed in terms of changes in these economic conditions at a particular point in time (for example, reductions in total consumption or GDP at a given point in time) or in terms of reductions in the growth rates leading to these economic conditions (for example, reductions in the rate of consumption or GDP growth). "	Clarification
6	43	11	11	Added "mitigation" before "impacts"	Clarification
6	44	22	22	Replaced "For" with "According to the"	Clarification
6	44	23	23	Deleted "reaching levels of 430-480 ppm CO2e by 2010" and added "collected" before "in the WG III"	Clarification
6	44	24	24	Added "for reaching levels of 430-480 ppm CO2eq by 2100" after "estimates"	Clarification
6	44	25	25	Replaced "2% to 12% in 2100" by "3 to 11% in 2100"	Error Correction

6	44	28	28	Inserted additional sentences: "These consumption losses correspond to an annual average reduction of consumption growth by 0.06 to 0.20 percentage points from 2010 to 2030 (median of 0.09), 0.06 to 0.17 percentage points through 2050 (median of 0.09), and 0.04 to 0.14 percentage points over the century (median of 0.06). To put these losses in context, studies assume annual average consumption growth rates without mitigation between 1.9 % and 3.8 % per year until 2050 and between 1.6 % and 3.0 % per year over the century. These growth rates correspond to increases in total consumption by roughly a factor of 2 to 4.5 by 2050, and from roughly four-fold to over ten-fold over the century (values are based on global projections in market exchange rates)."	Clarification
6	44	29		Fig.6.21: The y-axis labels in Panel d did not align with the y-axis scale (indicated by the horizontal lines). The zero was wrong siting at the bottom, n now corrected to the first horizontal line. The bold horizontal lines were moved up to zero, and the y-labels adjusted accordingly; in panels a/c/e/f the set size given for 2030 was also meant for 2020 and 2050, these numbers were now explicitly added to avoid any misunderstanding	Error Correction
6	45	5	7	Deleted the abbreviations "CL", "GL" and "AC".	Consistency
6	45	9	10	Deleted the sentence starting with "Box plots show"	Consistency
6	45	10	10	Replaced "Sample size" with "The number of scenarios included in the boxplots"	Consistency
6	45	12	12	Changed "9%" to "9.5%"	Error Correction
6	46	7	9	Added "CO2eq" after "530-650 ppm"	Clarification
6	46	8	9	Deleted "CL", "GL" and "AC"	Consistency
6	46	16	16	Replaced 'climate categories' with 'CO2eq concentration ranges'	Consistency
6	47	1	1	Fig.6.23: FF&I has been crossed out. The figure shows total CO2 emissions relative to baseline.	Error Correction
6	47	3	3	Deleted "reduction from fossil fuel combustion and industry" after emissions	Consistency
6	47	4	4	Changed "2010" to "2011"	Error Correction
6	47	20	20	Added "in the EMF27 study (Kriegler et al. 2014)" after "models".	Clarification
6	47	21	21	Deleted "for EMF 27" after "combinations".	Clarification
6	48	2	4	Changed the first sentence of the caption to "Relative increase of net present value mitigation costs (period 2015-2100, 5% discount rate) from technology portfolio variations compared to a scenario with default technology availability"	Consistency
6	48	3	4	Added concentration labels in caption harmonized with figure legend	Consistency
6	48	4	10	Deleted the next four sentences.	Consistency
6	48	10	10	Changed "x-axis" into "horizontal axis"	Consistency
6	48	11	11	Added "leading to energy demand reductions of 20-30% by 2050 and 35-45% by 2100 relative to the default baseline" after "improvements"	Clarification
6	48	11	16	Spelled out the category names	Clarification
6	48	14	14	Replaced "bioenergy and solar and wind" with "renewable energy".	Consistency
6	48	16	16	Deleted "limited technology future with"	Consistency
6	48	18	18	Added a sentence "Only those scenarios from the EMF27 study are included that reached the 430-480* and 530*-580 ppm CO2eq target ranges or were close to it (*: up to 490 ppm for the lower target, and above 515 ppm for the higher target)" at the end of the caption.	Clarification
6	49	16	16	added "global" after "limiting"	Clarification
6	49	21	21	added "global" after "near-term".	Clarification
6	50	2		added in caption: "Not all model simulations of delayed additional mitigation until 2030 could reach the lower concentration goal of 430-530 ppm CO2eq (for 2030 emissions above 55 GtCO2eq, 29 of 48 attempted simulations could reach the goal; for 2030 emissions below 55 GtCO2eq, 34 of 51 attempted simulations could reach the goal). "	Clarification
6	50	6	6	Replaced "belonging to" with "reaching concentration goals of".	Clarification
6	50	7	7	Added "CO2" after "ppm".	Clarification
6	50	7	7	Deleted "scenarios" and added "respectively".	Clarification
6	50	10	11	Changed "participation" to "mitigation".	Consistency
6	50	23		Added reference Kriegler et al., 2014b	Clarification
6	50	27		Corrected references from "(Babiker, 2005; Böhringer et al., 2012, p. 29; Bosetti and De Cian, 2013; Arroyo-Curras, T. et al., 2014)" to "(Arroyo-Curras et al., 2014; Babiker, 2005; Bauer et al., 2014; Blanford et al., 2014; Böhringer et al., 2012; Bosetti and De Cian, 2013; Kriegler et al., 2014b)"	Error Correction
6	51	7	7	added reference to "Clarke et al. 2009" after "EMF 22 scenarios".	Clarification
6	51	11	11	added "for those models that could produce these scenarios" after "double".	Clarification
6	51	29	-	Figure 6.26: Region label "OECD" was not correctly describing countries aggregated in that category and was replaced by "Annex I without Russia"	Error Correction
6	52	38	38	Deleted "in addition" before "climate policies".	Error Correction
6	53	5	5	Changed "This literature" to "Studies".	Clarification
6	53	36	36	added "relative" before "aggregate costs"	Clarification
6	53	37	37	added ", or relative to," before "baseline conditions"	Clarification
6	53	40	40	added "relative" after "in these"	Clarification
6	53	40	40	added reference to "Stern et al. 2012" after Tavoni et al. 2014.	Error Correction
6	53	41	41	Replaced 'BAU' with 'emissions in a baseline, or no-policy, scenario'	Consistency
6	54	1	1	replaced "relative to" by "measured as a percentage changed from"	Clarification
6	55	11	12	added a "*" at ECN and deleted a "*" at PIK and PNNL so it reads: "... ECN*, PIK, PNNL, NIES*..."	Error Correction

6	55	13		added at end of last note "Some of these model studies are more extensively described in a particular model study (Kober et al., 2013). "	Clarification
6	56	14		"stabilization scenarios" with "concentration levels"	Clarification
6	57	2	7	Deleted 'for various concentration ranges', added 'for different 2100 CO2eq concentration ranges' after 'emissions', and replaced 'categories' with 'ranges'.	Consistency
6	58	32	32	Deleted "a bit"	Clarification
6	59	2	4	rephrased the sentence to "There are several studies that diverge from the bulk	Clarification
6	59	10		added at end of paragraph: "The deployment of fossil fuels is generally higher in scenarios with CCS. The availability of CCS would thus reduce the adverse effect of mitigation on the value of fossil fuel assets."	Clarification
6	60	21	21	Added "mitigation begins immediately" after "in which".	Clarification
6	60	24	24	replaced "forcing" with "concentration"	Consistency
6	60	25	25	Changed the end of the sentence to "below the range of global GHG emissions implied by the Cancun Pledges (see Section 13.13.1.3 for more details), as in Rogeljs et al."	Consistency
6	60	27	28	replaced "Cancun range" with "possible range of the Cancun Agreements"	Error Correction
6	60	32	32	Deleted "by the end of the century".	Clarification
6	60	41	41	replaced "long-term forcing" by "end-of-century concentration"	Clarification
6	60	48	48	replaced "long term forcing" by "end-of-century concentration"	Consistency
6	61	16	16	replaced "goals" by "concentration levels"	Consistency
6	61	24	24	replaced "forcing" by "concentrations"	Consistency
6	61	42	42	Changed "Cancun range in 2020" to "global GHGH emission reductions through 2020 implied by the Cancun Pledges (see Section 13.13.1.3)"	Clarification
6	61	42	42	replaced "range" with "Agreements"	Clarification
6	62	2		Figure 6.31: In legend added "probability" after "exceedance"	Clarification
6	62	3	3	Replaced "Scenarios With Climate Forcing in the range of" by "scenarios reaching".	Clarification
6	62	3	16	added in caption explanation to transparent rectangle used in figure: "For these below-50% scenarios the interquartile range is shown by a black rectangular frame."	Clarification
6	62	5	5	Added "based on MAGICC results" after "probability".	Clarification
6	62	8		added 'in climate mitigation' behind 'participation'	Clarification
6	62	9	9	replaced "Cancun range" by "range of global GHG emissions in 2020 implied by the Cancun Pledges".	Consistency
6	63	3		Figure 6.32: Clarified that negative emissions are "net negative" in legend	Clarification
6	63	4	16	in caption added clarification "Extreme scenarios with very high net negative emissions (>20 GtCO2/yr) in 2100 are reported separately as diamonds."	Clarification
6	63	9	9	Added "The range of global GHG emissions in 2020 implied by the Cancun Pledges is based on an analysis of alternative interpretations of national pledges (see Section 13.13.1.3 for details)." after "green".	Consistency
6	63	11	12	Replaced "Annual rates of historical emissions change (sustained over a period of 20 years) are shown in grey." with "Annual rates of historical emissions change between 1900-2010 (sustained over a period of 20 years) and average annual emissions change between 2000-2010 are shown in grey."	Clarification
6	65	1	1	replaced "transformation" with "baseline and mitigation"	Clarification
6	65	30	30	Replaced "models for the integrated of climate change" by "integrated models".	Error Correction
6	66	16	16	Added cross-reference to Table 6.6.	Clarification
6	66	26	26	Removed "--hence including those stimulating progress for "dirty" technology --	Clarification
6	66	28	28	replaced "clean energy" with "low-carbon"	Consistency
6	68	36	36	Deleted "side-effects resulting from".	
6	69	8	8	Changed 'demand side' to 'energy end-use'	Consistency
6	69	16	16	Deleted ', and increasing quality of life (such as thermal comfort and improved working conditions)'	Error Correction
6	69	37	37	Changed Rogelj et al., 2013b to 2013c.	Error Correction
6	70	1		Performed a couple of changes to the table content to be consistent with sector chapters.	Consistency
6	70	1		Table 6.7: Column 4: Changed unit to "%/yr"; in cell Transport/Environmental added "?" before "Ecosystem [...]"; Transport, 1st column changed "Journey reduction and avoidance" to "Journey distance reduction and avoidance"; in cell Industry:Material efficiency of goods, recycling/Economic changed "waste recycling" to "in waste recycling market"; in Industry, 1st column added "Technology" before "energy efficiency".	Clarification
6	70			Add to footnote of column 2/3 "deployment" at the end: "Data for 2010 is historic data from IEA (2012c, 2012d)."	Clarification
6	71			Table 6.7: Row 3, column 4: Inserted 'physical' between 'Increase' and 'activity'.	Clarification
6	71			Table 6.7: Row 1, column 4: Changed 'Noise' to 'Health impact via reduced noise'.	
6	72			Table 6.7: row 4, column 4: Delete entry "Local conflicts (reduced inequity in consumption) (I / I)"	Error Correction
6	72			Table 6.7: row 4, column 4: replace "New diverse lifestyle concept" with "Wellbeing via diverse lifestyle choices"	Clarification

6	73	18	18	Changed 'preservation' to 'conservation' for consistency with underlying source and other chapters.	Consistency
6	73	40		change "particular" to "particulate"	Error Correction
6	74	1	2	Currency units updated from USD2005 to USD2010: 55-420 The original West et al. paper reported all values in USD2005.	Consistency
6	74	5	5	Changed 'warming' to 'forcing'	Error Correction
6	74	25	25	Replaced "reference" with "baseline"	Consistency
6	74	28	28	Replaced "reference case" with "baseline scenario"	Consistency
6	74	30	30	Replaced "reference case" with "baseline scenario"	Consistency
6	74	79	79	Added a reference because there are two Rafaj et al. (2012).	Error Correction
6	75	13	13	Replaced "reference case" with "baseline scenario"	Consistency
6	75	23	25	replace second part of sentence after "Luft" reference with "indeed most of the modeling literature indicates that climate mitigation would decrease oil export revenues of oil exporters (IEA, 2009; Haurie and Vielle, 2010; Bauer et al., 2013, 2014; Tavoni et al., 2013; McCollum et al., 2013). However, three recent studies argue that if the cost of alternatives to conventional oil is high enough, conventional oil exporters could benefit from climate policies, particularly in the near term (Persson et al. 2007; Johansson et al. 2009; Nemet and Brandt, 2012). Although there is broad agreement in the literature about the overall negative effect on oil export revenues, the distribution of this effect will differ between exporters of conventional vs unconventional oil exporters. "	Clarification
6	76	38	38	Changed 'preservation' to 'conservation' for consistency with underlying source and other chapters.	Consistency
6	77	6	6	Replaced "reference case" with "baseline scenario"	Consistency
6	78	11	12	Changed "IPCC AR5 database" to "WGIII AR5 Scenario Database (Annex II 10)".	Error Correction
6	79	27	27	Replaced 'societal priorities' with 'policy objectives'.	Consistency
6	79	35	35	Replaced 'priorities' with 'objectives'.	Consistency
6	80	1	1	Replaced "transformation" with "mitigation"	Consistency
6	80	8	8	Changed "Othrough" to "6.4 through"	Error Correction
6	80	34		corrected "A.II.4" to "A.II.5"	Error Correction
6	80	42	42	cross-reference to Chapter 12 deleted	Consistency
6	80	45	47	Replaced "An important question is how closely the results from integrated modelling studies are consistent with sectorally-focused literature or how they complement each other." with "Important questions are how consistent the results from integrated modelling studies are with sectorally-focused literature and how they complement each other. "	Consistency
6	81	15		Fig.6.34: changed „Historic Data 2010“ to „Actual 2010 Level“; in right panel changed "CO2 Energy Supply" to "CO2 Energy Supply excl. Electricity and Heat Generation"	Clarification
6	81	16		in caption added: "In the left panel electricity sector emissions are shown ("Electricity*") in addition to energy supply sector emissions which they are part of, to illustrate their large role on the energy supply side. "	Clarification
6	82	1		6.35: Added individual data points to right panel as in SPM/TS	Clarification
6	82	2	3	Changed "430-530 ppm CO2-e scenarios" to "mitigation scenarios reaching 430-530 ppm CO2-eq in 2100".	Clarification
6	82	2	10	changed caption to "Direct emissions by sector normalized to 2010 levels (light blue dashed line) of CO2 and non-CO2 GHGs across sectors in mitigation scenarios reaching that reach around 450 (430-530 -480) ppm CO2eq concentrations in 2100 with default technology assumptions (using CCS (left panel) and without using CCS (right panel). Note that values below the dashed black zero line indicate negative sectoral emissions. The thick red lines correspond to the median, the coloured boxes to the interquartile range (25th to 75th percentile) and the whiskers to the total range across scenarios. Gray dots refer to emissions of individual models to give a sense of the spread within the ranges shown. The numbers at the bottom of the graphs refer to the number of scenarios included in the rangelanges that differs across sectors and time due to different sectoral resolution and time horizon of models. White dots in the right panel refer to emissions of individual scenarios to give a sense of the spread within the ranges shown due to the small number of scenarios. Source: WG III AR5 Scenario Database (Annex II.10). Includes only scenarios based on idealized policy implementation that provide emissions at the sectoral level. Note that scenarios from the AMPERE study were excluded due to large overlap with the EMF27 study, adapted from .. Historical data: JRC/PBL (2013), IEA (2012), see Annex II.9."	Clarification
6	83	1	1	Changed "therefore consitutes" to "could therefore constitute".	Clarification
6	83	4	4	Replaced "focus either" by "are those that focus"	Clarification
6	83	5	5	Added "those that focus" after "and/or"	Clarification
6	83	10	10	corrected reference to Figure 6.16 to Figure 6.17	Error Correction
6	83	49	49	Replaced "transformation" with "mitigation"	Consistency
6	84	22	23	Replaced "the colour coding is based on categories of 2100" by "for baseline and mitigation scenarios reaching 430-480 ppm and 530-580 ppm in 2100".	Clarification

6	85	16	16	replaced "transformation" with "mitigation"	Consistency
6	85	18	19	Deleted "The thick black line line corresponds to the median, the coloured box	Consistency
6	86	6		6.38: Changed "Historic Data 2010" to "Actual 2010 Level"	Clarification
6	86	8	8	replace "transformation" with "mitigation"	Consistency
6	86	8	8	changed "from three different concentration categories" to "baselines and two different concentration cateogries"	Clarification
6	86	11	13	Deleted "The thick black line corresponds to the median, the coloured box to the inter-quartile range (25th to 75th percentile) and the whiskers to the total range across all reviewed scenarios."	Consistency
6	86	13	13	Replaced "full sectoral coverage" by "additional climate policies whereas empty symbols correspond to studies with baseline assumptions".	Clarification
6	86	19	19	Changed "four" to "three"	Consistency
6	86	20	20	Added "It also influences mitigation through" and deleted "and" before "biogeophysical".	Consistency
6	86	25	25	Changed "carbon storage is" to "efforts to store carbon in land are".	Consistency
6	87	22	22	addition of reference to the German BMBF assessment (Rickels et al. 2011) which was missed.	Clarification
6	87	40	41	Added "involved for some techniques, particularly most CDR methods, and the" between "costs" and "potential".	Clarification
6	87	41	41	Inserted "with the nearly all techniques" after "involved".	Clarification
6	87	42	45	This sentence was changed to clarify the statements made: "Most assessments agree that geoengineering technologies should not be treated as a replacement for conventional mitigation and adaptation due to the high costs involved for some techniques, particularly most CDR methods, and the potential risks or pervasive uncertainties involved with nearly all techniques (Royal Society, 2009; Rickels et al., 2011). "	Clarification
6	88	34	34	"efficiency" replaced with "efficacy" as it is more appropriate.	Clarification
6	89	22	22	Changed U.S. GAO to U.S. Government Accountability Office (GAO).	Clarification
6	89	37	37	Replaced all 'cf.' with 'see' in Zotero	Consistency
6	90	2	2	Added "The Use of" before "BECC".	Clarification
6	90	6	7	a reference that was missed was added (Keller et al. 2008)	Clarification
6	90	23	28	This short paragraph was changed to make clear that not all SRM techniques increase the planetary albedo: "SRM geoengineering technologies aim to lower the Earth's temperature by reducing the amount of sunlight that is absorbed by the Earth's surface, and thus countering some of the greenhouse gas induced global warming. Most techniques work by increasing the planetary albedo, thus reflecting a greater fraction of the incoming sunlight back to space. A number of SRM methods have been proposed:"	Error Correction
6	90	31	31	"replicate" replaced with "imitate" as the aim to produce a similar effect.	Error Correction
6	90	37	37	Replaced 'could' with 'might'	Clarification
6	90	38	38	"replicating" replaced with "producing" as the effect would not be identical to the analogy.	Error Correction
6	91	3	3	"enhancing the planetary albedo" replaced with "reducing incoming solar radiation" as the new phrase is more inclusive.	Clarification
6	91	11	11	replaced "hydrological intensity" with "hydrological cycle intensity" as this is the correct scientific term	Error Correction
6	92	10	10	replaced "limiting global radiative forcing" with "countering global GHG radiative forcing" to replace the erroneous "limit" and to clarify.	Error Correction
6	92	16	16	added "SRM" before "forcing" to clarify	Clarification
6	92	17	17	replaced "it" with "the SRM forcing" to clarify	Clarification
6	93	43	43	Added "actually" before "play".	Clarification
6	93	43	44	The first sentence was modified as it didn't acknowledge the large role of some CDR approaches in the RCP scenarios, the new sentence follows: "Despite the assumption of some form of negative CO2 emissions in many scenarios, including those leading to 2100 concentrations approaching 450 ppmv CO2eq, whether proposed CDR or SRM geoengineering techniques can actually play a useful role in transformation pathways is uncertain as the efficacy and risks of many techniques are poorly understood at present."	Clarification
6	95	33		After "time" the following was insert: "although a portfolio approach is necessary" as previous sentence was moved up within paragraph.	Clarification
6	100	1	2	deleted reference as not cited in chapter	Clarification
6	105	9	10	deleted reference as not cited in chapter	Clarification
6	113	20	22	corrected title of paper (authors, doi, etc. were correct)	Error Correction
6	117	29		Added reference "Keller K., G. Yohe, and M. Schlesinger (2008a). Managing the risks of climate thresholds: Uncertainties and needed information. Climatic Change 91 (1-2), 5-10."	Error Correction
6	All	-	-	Terminology in AFOLU was made more precise and for data that includes scenarios including land-related emissions "LUC" was changed to "Net AFOLU".	Clarification
6	All	-	-	Captions of all figures were adjusted to reflect changes in all figures of the chapter due to them being designed by the graphic designer; further, caption text was revised if necessary to comprehensively explain the figure elements	Consistency
7	4	6	6	Add 'energy' before 'end-use'	Consistency
7	4	10	10	Growth in sector' replaced by "Annual GHG-emissions growth in the global energy supply sector.."	Clarification

7	4	10	11	2001 replaced by 2000 in two cases, 1991 replaced by 1990 in one case.	Error Correction
7	4	17	17	Add 'baseline' before 'scenarios'	Consistency
7	4	26	26	Replace 'and' with 'including'	Error Correction
7	4	32	32	Delete 'assessment'	Consistency
7	4	42	42	extreme' replaced with 'marked'	Error Correction
7	4	footnote	footnote	Add 'dioxide'	Consistency
7	5	1	1	Add 'supply' after 'RE'	Error Correction
7	5	8	8	Delete 'and water' behind 'air'	Error Correction
7	5	20	20	approximately' deleted	Error Correction
7	5	34	34	Add 'power' behind 'fossil-fired'	Clarification
7	5	39	39	Replace 'a carbon tax on emissions' with 'sufficiently high carbon prices'	Error Correction
7	6	1	1	Add 'coupled with' behind 'Bioenergy'	Consistency
7	6	16	16	Replace 'low stabilization scenarios' with 'mitigation scenarios reaching 430-530 ppm CO2eq by 2100'	Error Correction
7	6	34	34	Delete 'and positive spill-overs'	Error Correction
7	6	39	39	add 'which can, however, be addressed by policies to support the poor'	Error Correction
7	7	5	5	1991 replaced by 1990, 2001 replaced by 2000	Error Correction
7	8	17	17	Delete 'assessment'	Consistency
7	11	1	20	2001 replaced by 2000 in five cases, 2011 replaced by 2010 in three cases, 1991 replaced by 1990 in one case	Error Correction
7	12	2	15	2001 replaced by 2000 in two cases	Error Correction
7	13	2	8	2001 replaced by 2000 in three cases, 1991 replaced by 1990 in one case	Error Correction
7	13	14	14	Figure 7.3 - x-axis of right-hand panel amended. 1971 replaced by 1970, 1981 replaced by 1980, 1991 replaced by 1990, 2001 replaced by 2000	Error Correction
7	13	22	22	2001 replaced by 2000	Error Correction
7	14	5	5	Delete 'carbon emission'	Consistency
7	14	7	25	2001 replaced by 2000 in four cases, 1991 replaced by 1990 in two cases	Error Correction
7	14	16	16	Figure 7.4 - x-axis of inset amended. 1971 replaced by 1970, 1981 replaced by 1980, 1991 replaced by 1990, 2001 replaced by 2000	Error Correction
7	15	4	4	2001 replaced by 2000	Error Correction
7	15	47	47	Text deleted 'as established by the Cancun Agreement'. Replaced with text reading "The scenario analysis carried out in Section 6.3.4 illustrates in detail that the availability of fossil fuels alone will not be sufficient to limit CO2eq concentration to levels such as 450 ppm, 550 ppm, or 650 ppm [Figure 6.15]. " as SPM trickle-back.	Clarification
7	18	28	28	Add 'dioxide'	Consistency
7	19	36	36	(LHV)' deleted	Error Correction
7	23	23	23	Replace 'GHG-emissions' with 'climate change'	Consistency
7	27	24	24	Inserted reference to Figure 11.22	Clarification
7	27	Footnote	Footnote	Reference to Section 11.13.3 added	Consistency
7	28	12	12	Replace 'GHG mitigation' with 'RE'	Error Correction
7	33	4	4	Delete 'GHG'	Consistency
7	34	21	21	II.10.1' replaced by II.6	Error Correction
7	34	22	22	combined heat, cooling and power plants' changed to 'combined heat and power plants'	Error Correction
7	34	25	25	Figure 7.7' replaced with 'Figure 7.9'	Error Correction
7	34	38	39	Text deleted "A higher capture rate can be most easily be achieved for oxyfuel-based plants"	Error Correction
7	35	3	3	Inserted 'projected emissions of future commercial plants of currently'	Error Correction
7	35	5	5	Parenthesized text amended to read "(harmonization of literature values for WG III AR5 Report and the full range of published values for WG III SRREN)	Error Correction
7	35	6	6	figure legend' replaced by 'the notes below'	Error Correction
7	35	6	6	Inserted text 'Note that percentiles are displayed for RE and traditional coal and gas in the SRREN, but not for coal CCS and gas CCS. In the latter cases, the entire range is therefore shown.'	Clarification
7	35	8	9	Sentence amended to read "For hydropower, the variation in biogenic methane emissions from project to project are the main cause of the large range."	Error Correction
7	35	9	9	At end of caption text added to read: "See also Annex II and Annex III."	Consistency
7	35	15	15	Text inserted as follows: "and the mean values of the typical contributions are shown for the set of those cases where the data base allowed the separation. For world average coal and gas, the uncertainty range represents the uncertainty in the mean; the range of the underlying distribution is much larger. "	Clarification
7	36	2	2	Reference to Section 11.13.4 added	Consistency
7	36	6	6	Text inserted "No contribution analysis was available for this category"	Clarification
7	36	6	6	II.10.1' replaced by II.6	Error Correction
7	36	6	6	Sentence amended to read "For methodological issues, see Annex II.6 and Section 11.13.4, for a discussion of the data sources see Annex II.9.3. The numbers are presented in Table A.III.2."	Clarification
7	36	29	29	mainly' inserted between 'are' and 'associated'	Error Correction

7	36	50	50	Text inserted: "...although some reservoirs act as sinks (Chanudet et. al 2011). Few studies appraise net emissions from freshwater reservoirs, i.e., adjusting for pre-existing natural sources and sinks and unrelated anthropogenic sources (Kumar et al, 2011, section 5.6.3.2)."	Error Correction
7	36	50	50	Recent work' replaced with 'A recent meta-analysis of 80 reservoirs'.	Clarification
7	36	50	50	factors' inserted between 'emissions' and 'are'	Error Correction
7	36	52	52	few large reservoirs' replaced with 'few reservoirs with a large area in relation to electricity production and thus low power intensity (w/m2)."	Error Correction
7	37	1	1	Sentence amended to read "The global average emission rate was estimated to be 70 gCO ₂ eq/kWh"	Error Correction
7	37	2	2	Text inserted: " Due to the high variability among power stations, the average emissions rate is not suitable for the estimation of emissions of individual countries or projects."	Error Correction
7	38	1	1	Figure header changed to read "Scenarios Reaching 430 - 530 ppm CO ₂ eq in 2100 in Integrated Models"	Clarification
7	38	1	1	Figure 7.7. Heading of left-bottom panel amended to read "Emission Intensity of Electricity [gCO ₂ eq/kwh]"; units in text of legend "Conditions of Operation" changed from "100 USD2010/tCO ₂ " to "100 USD2010/tCO ₂ eq"	Error Correction
7	38	2	2	Units in figure caption changed to read "gCO ₂ eq/kWh" in one instance	Error Correction
7	38	4	4	Text amended to read "cf. Figure 7.6 for lifecycle emissions; Annex III, for LCOE)", adding reference to Figure 7.6"	Clarification
7	38	6	6	Text inserted 'in 2030 and 2050'	Clarification
7	38	7	7	Chapter 6' replaced by Annex II, Section A.II.10	Error Correction
7	38	8	6	Deleted Figure notes. Replaced with sentence reading "Note: The inter-comparability of LCOE is limited. For details on general methodological issues and interpretation see Annexes as mentioned above."	Error Correction
7	38	8	8	Text added "The global average of specific direct CO ₂ emissions (gCO ₂ /kWh) of power generation in 2010 is shown as a vertical line (IEA, 2013)."	Clarification
7	40	13	13	Text added at end of paragraph: (see Section 7.5.5)	Clarification
7	43	Social column	Social column	Arrow direction for Health impact via reduced air pollution reversed.	Error Correction
7	43	Table 7.3	Table 7.3	Text added to column heading Social reading "(including health)"	Clarification
7	45	1	7	Paragraph repeated - deleted from text.	Error Correction
7	45	31	31	257,400' converted to 2010 USD	Consistency
7	48	6	15	Figure 7.8 and caption moved behind call-out on subsequent page.	Consistency
7	49	19	19	if often' replaced by 'may be'	Error Correction
7	50	32	32	Delete 'GHG'	Consistency
7	52	20	20	such as' replaced by 'related to'	Clarification
7	52	Footnote 25	Footnote 25	Add '(see also section 2.6.6.2)'	Consistency
7	55	10	10	After 'slums', text inserted ', particularly in sub-Saharan Africa.'	Clarification
7	56	40	40	Delete 'assessment'	Consistency
7	62	11	11	Delete 'assessment'	Consistency
7	62	46	46	Replace 'emissions' with 'climate change'	Consistency
7	63	21	21	Delete 'emissions'	Consistency
7	64	6	6	and fossil fuels with CCS' amended to read "fossil fuels with CCS and bioenergy with CCS".	Error Correction
7	67	34	34	Text inserted reading"Note: Only scenarios that apply the full, unconstrained mitigation technology portfolio of the underlying models (default technology assumption) are shown. Scenarios with exogenous carbon price assumptions are excluded in both panels. In the right panel, scenarios with policies affecting the timing of mitigation other than 2030 interim targets are also excluded."	Clarification
7	69	3	3	Replace 'sequestration' with 'dioxide storage'	Consistency
7	69	Footnote	Footnote	Add 'dioxide'	Consistency
7	74	45	45	Delete 'assessment'	Consistency
7	75	27	27	Add 'dioxide'	Consistency
7	75	37	37	Delete 'GHG'	Consistency
7	75	40	40	Add 'dioxide'	Consistency
8	5	7	9	Changed paragraph from "The mitigation potential of biofuels (particularly advanced "drop-in" fuels for aircraft and other vehicles) will depend on technology advances and sustainable feedstocks (medium evidence; medium agreement). [8.3]" to "Methane-based fuels are already increasing their share for road vehicles and waterborne craft. Electricity produced from low-carbon sources has near-term potential for electric rail and short- to medium-term potential as electric buses, light-duty and 2-wheel road vehicles are deployed. Hydrogen fuels from low-carbon sources constitute longer-term options. Gaseous and liquid-biofuels can provide co-benefits. Their mitigation potential depends on technology advances (particularly advanced 'drop-in' fuels for aircraft and other vehicles) and sustainable feedstocks. (medium evidence;, medium agreement) [8.2, 8.3]"	Clarification

8	5	16	19	Changed "Over the medium-term (up to 2030) to long-term (to 2050 and beyond), urban redevelopment and new infrastructure, linked with land use policies, could evolve to reduce GHG intensity through more compact and integrated transit, cycling and walking-oriented urban planning (with a 20-50% reduction below baseline possible between 2010 and 2050)." to "Over the medium-term (up to 2030) to long-term (to 2050 and beyond), urban (re)development and investments in new infrastructure, linked with land use policies, integrated urban planning, transit-oriented development and more compact urban form that supports cycling and walking can all lead to modal shifts. Such mitigation measures could evolve to possibly reduce GHG intensity by 20–50% below 2010 baseline by 2050."	Clarification
8	6	8	12	Changed In least developed countries, prioritizing access to pedestrians and integrating non-motorized and public transport services can result in higher levels of economic and social prosperity. In fast growing emerging economies, investments in mass transit and other low-carbon transport infrastructure can help avoid future lock-in to carbon intensive modes." to "Prioritizing access to pedestrians and integrating non-motorized and public transporttransit services can result in higher levels of economic and social prosperity. in all regions. Good opportunities exist for both structural and technological change around low-carbon transport systems in most countries but particularly in fast growing emerging economies, where investments in mass transit and other low-carbon transport infrastructure can help avoid future lock-in to carbon intensive modes.2	Clarification
8	7	12		after 2010 added footnote "CO ₂ eq units are used throughout this chapter for direct emissions wherever feasible, although this is not always the case in some literature that reports CO ₂ emissions only. For most transport modes, non-CO ₂ gases are usually less than 5% of total vehicle emissions".	Clarification
8	7	23		Fig 8.1: Slight adjustment of indirect emissions numbers as methodology was revised to be improve consistency with direct emission data	Consistency
8	10	10		Fig.8.3: In the inset on the x-axis we corrected "Int\$2000" to "Int\$2005".	Error Correction
8	10			Fig 8.3: Slight adjustment of indirect emissions numbers as methodology was revised to be improve consistency with direct emission data	Consistency
8	11			Fig 8.4.: Data was remapped to comply with standardise RC5 regions (for their definition see Annex II.2)	Consistency
8	13			In Section 8.2 swapped Sections 8.2.2 (Trends) and 8.2.1 (Drivers)	Clarification
8	29	5		replaced reference to table with "Figure 8.6" as the table only shows up several pages later	Clarification
8	31	28		Section 8.6: replaced an numerous instances "CO ₂ " with "CO ₂ eq"	Error Correction
8	34			Table 8.3 reordered for easier comprehension (Standardised with Figs TS 21 and TS 22)	Clarification
8	43	5		table 8.4, row 2, column 3: Changed 'Noise' to 'Health impact via reduced noise'	Clarification
8	43	6		row 4 ("Compact urban form and improved transport infrastructure. Modal shift."), column 3 change "Increased activity" to "Increased physical activity"	Clarification
8	51	28	29	change 2nd last sentence in note to: "The specific observations from sectoral studies are shown as black dots with light bars (policy) or dark bars (baseline) to give the full ranges."	Clarification
8	52	7		Fig.8.10: Changed left panel y-axis to "Transport Demand for Passengers [p-km/cap/yr] and Freight [t-km/cap/yr]".	Clarification
8	54	4		Added after "2050": "Box plots show minimum/maximum, 25th/75th percentile and median." and removed "(" and ")" in next sentence.	Clarification
8	54	8		Added after "type" for clarification "instead of GHG concentration categories."	Clarification
8	57	20	21	change "price signals especially for passenger travel" to "price signals, such as fuel carbon taxes, especially for passenger travel"	Clarification
8	58	1	4	change "Even if this trend of slowing LDV demand eventually heads downwards, it is unlikely to off-set projected growth in total LDV emissions because, in the rest of the world, populations and economies are likely to continue to grow along with LDV ownership." to "Even if this OECD trend of slowing growth in LDV travel continues or even eventually heads downwards, it is unlikely to offset projected growth in non-OECD LDV travel or emissions because those populations and economies are likely to continue to grow rapidly along with LDV ownership."	Clarification
8	59	1		Fig.8.13: Added "LDV Emission Efficiency" to y-axis	Clarification
8	63	7	9	change "The inclusion of air transport in the EU emission trading scheme (ETS) is the only binding policy to attempt to mitigate emissions in this sector (Anger, 2010; Petersen, 2008). Preston et al., (2012) estimated that the EU is currently responsible for 35% of global aviation emissions." to "The EU is currently responsible for 35 % of global aviation emissions. The inclusion of air transport in the EU emission trading scheme (ETS) is the only binding policy to attempt to mitigate emissions in this sector (Anger, 2010; Petersen, 2008; Preston et al., 2012)."	Clarification

8	68			whole bibliography: a few references were deleted from the bibliography as they were not used in the chapter anymore	Clarification
8	72	37		corrected surname of author from "Budde Christensen" to "Christensen"	Error Correction
8	34ff.	Table 8.3		Replaced "CO2" with "CO2eq" in columns 1-3	Error Correction
8	All			Corrected references that were double in the list	Error Correction
8	All			General corrections after copy-editing	Error Correction
8	All			All figures revised slightly to standardise colours etc	Consistency
8	All			Replaced "CO2" with "CO2eq" throughout chapter for consistency with corrections to table 8.3 and to Annex III	Error Correction
9	5	2	2	Buildings total GHG emissions: 19% direct+indirect	Error Correction
9	5	2		Buildings global total energy use corrected from 34% to 32%, correcting misinterpretation of database categories	Error Correction
9	5	3	3	Corrected buildings share of F-gases to "1/8 to 1/3"	Error Correction
9	5	16		added "Recent advances in technology, design practices and know-how, coupled with behavioural changes, can achieve a two to ten-fold reduction in energy requirements of individual new buildings and a two to four-fold reduction for individual existing buildings largely cost-effectively or sometimes even at net negative costs."	Clarification
9	7	1	1	Converted from 2010 EUR to 2010 USD	Consistency
9	8	1		Table 9.1: heavily edited the table to follow coherent presentation, content not affected	Clarification
9	9	5	5	Buildings total GHG emissions: 19% direct+indirect	Error Correction
9	9	5	6	Buildings global total energy use corrected from 34% to 32%, correcting misinterpretation of database categories. Also corrected share of buildings energy consumption in primary energy (from 23% to 22%), share of buildings in total electricity consumption (from 30% to 51%) and total energy use in Buildings (from 125 to 117 PJ). All based in World, year 2010, source IEA 2012 Edition of Energy Balances of non-OECD Countries	Error Correction
9	9	6	7	Corrected buildings share of F-gases to "1/8 to 1/3"	Error Correction
9	9	15	15	corrected to "1/3 of black carbon emissions"	Error Correction
9	10	14	15	Corrected buildings share of F-gases to "1/8 to 1/3"	Error Correction
9	10	20	20	Add "eq" after CO2	Error Correction
9	10	24	25	Fig.9.1, Fig.9.2: Indirect emission data was adjusted due to changes in methodology to compute emissions that made them more consistent with the direct emission data	Error Correction
9	10	29	30	Buildings global total energy use corrected from 34% to 32%, correcting misinterpretation of database categories. Accordingly, shares also changed in residential (25% to 24%) and commercial (9% to 8%) subsectors. Total final energy use corrected from 32.72 to 32.43 PWh. All based in World, year 2010, source IEA 2012 Edition of Energy Balances of non-OECD Countries	Error Correction
9	12	47		deleted "(Ürge-Vorsatz et al., 2013a)"	Error Correction
9	13	9		deleted "(Ürge-Vorsatz et al., 2013a)"	Error Correction
9	13	22		added to caption "(GEA region abbreviation added in brackets where different from abbreviation used in this report)"	Clarification
9	14	2		corrected "83%" to "84%"	Error Correction
9	14	7		corrected "57%" to "61%"	Error Correction
9	14	7		corrected "2030" to "2050"	Error Correction
9	14	9	10	deleted "More detail information about each driver trend can be found in (Ürge-Vorsatz et al., 2013a)"	Error Correction
9	14	13	16	Figure 9.6, caption: Replaced "Further details in: historic data 1980-2000 detailed in from (Ürge-Vorsatz et al., 2013a); projections: 2010-2050 data based on frozen efficiency scenario in (Ürge-Vorsatz et al., 2013b)" with "Source: Ürge-Vorsatz et al. (2013) with projection data (2010 – 2050) from frozen efficiency scenario."	Error Correction
9	14	13		Figure 9.6: Removing historic trends in some of the drivers in which historic data due to too previously misinterpreted data.	Error Correction
9	14	13		Figure 9.6: general: Left panel: Label was corrected ("92" -> "93"); Right panel: Energy use per area and floor area data was corrected, energy use label was corrected, too.	Error Correction
9	15	1	4	Figure 9.7, caption: Replaced "historic data (1980-2000) from (Ürge-Vorsatz et al., 2013a) and projections (2010-2050) based on a frozen efficiency scenario (Ürge-Vorsatz et al., 2013b)." with "Source: Ürge-Vorsatz et al. (2013) with projection data (2010 – 2050) from frozen efficiency scenario."	Error Correction
9	15	1		Fig.9.7: Removing historic trends in some of the drivers in which historic data due to too previously misinterpreted data.	Error Correction
9	17	34	35	replaced "A systemic approach is more relevant to energy use than efficiencies of individual" with "Savings at the system level are generally larger than for"	Clarification
9	19	14		changed "with significantly more that" to "with significant additional floor area that"	Clarification
9	19	17		changed "in cold climate regions with minimal insulation requirements" to "in cold climate regions where existing buildings have little to no insulation"	Clarification
9	21	11	11	Converted from 2010 EUR to 2010 USD	Consistency
9	22	6	6	Converted from 2010 EUR and 2010 UK Stlg to 2010 USD	Consistency

9	23	39	39	Converted from 2010 EUR to 2010 USD	Consistency
9	25	20	31	Section 9.3.6 on F-gas shares better explained	Error Correction
9	26	7		removed "India"	Clarification
9	27	1	5	replaced "in particular the "part time & part space" indoor climate conditioning, passive design for indoor thermal and lighting and take mechanic system only for the remaining needs when the passive approaches cannot meet the comfort demand. By relative innovation technologies towards further improvements in indoor service levels, such" with "in particular through the use of 'part-time' and 'part-space' indoor climate conditioning, using mechanical systems only for the remaining needs when passive approaches cannot meet comfort demands. Such"	Clarification
9	27	29		Figure 9.9, caption: replaced "Peng et al., 2012" with "Zhang et al., 2010"	Clarification
9	28	1		Figure 9.10, caption: replaced "Peng et al., 2012" with "Zhang et al., 2010"	Clarification
9	28	1		Figure 9.11, caption: replaced "Peng et al., 2012" with "Zhang et al., 2010"	Clarification
9	31	30	31	Fig 9.13 Taiwan, Province of China and Hong Kong, SAR, China removed	Consistency
9	32	22		Figure 9.12, caption: replaced "Final building heating and cooling energy use scenarios from 2005 to 2050 in the Global Energy Assessment" by "Final building heating and cooling energy use in 2005 and in scenarios from the Global Energy Assessment (GEA) for 2050,"	Clarification
9	32	30	31	Fig 9.13: Changed colour coding of datapoint from individual countries (too many colours needed) to encoding RC10 regions.	Clarification
9	32	33		Figure 9.13, caption: Added at end "For RC10 region definitions see Annex II.2.1."	Clarification
9	32	33		added at end of caption Figure 9.13: "Note that for some studies there are multiple entries (indicated by number in extra bracket)."	Clarification
9	33	1	2	Table 9.6 Taiwan, Province of China removed	Consistency
9	34	1	2	Table 9.6 Hong Kong, SAR, China removed	Consistency
9	34	1		Table 9.6: Linked enumeration used also in Fig.9.13 with individual country names so that Fig.9.13 entries can be properly identified.	Clarification
9	36	1	10	replaced all footnotes with "1) The Table presents the potential of final energy use reduction (if another is not specified) compared to the baseline and/or base year for the end-uses given in the column 3 and for the sectors indicated in the column 5. 2) References: 1 - (Anisimova, 2011), 2–15 - (IEA, 2002), 16 - (Yue and Huang, 2011), 17 - (Vardimon, 2011), 18 - (Izquierdo et al., 2011), 19 - (GPI, 2010), 20 - (Brown et al., 2008a), 21 - (Sartori et al., 2009), 22 - (Pantong et al., 2011), 23 - (Dubois and Blomsterberg, 2011), 24 - (Garrido-Soriano et al., 2012), 25 - (Radhi, 2009), 26 - (Taylor et al., 2010), 27 - (Zhou et al., 2011a), 28 - (Ürge-Vorsatz et al., 2012c), 29 (IEA, 2010b), 30 -(Harvey, 2010), 31 - (Laitner et al., 2012) , 32 -(Eichhammer et al., 2009), 33 -(Tommerup and Svendsen, 2006), 34 - (Chan and Yeung, 2005), 35 - (Siller et al., 2007), 36 - (Schimschar et al., 2011), 37 - (Giraudet et al., 2012), 38 - (Sanquist et al., 2012), 39 -(Streimikiene and Volochovic, 2011), 40 – (Mills, 2011); 3) EE – energy efficiency; 4) H – space heating; C – space cooling; W – hot water; L – lighting; APPL – appliances; ALL – all end-uses; EI - electricity; 5) T – technical; T-E – techno-economical; 6) BS – the whole building sector; RS – residential sector; CS – commercial sector; 7) pr.e. – primary energy."	Clarification
9	38	10		footnote: replaced the footnote with additions to the captions of Figures 9.14, 9.15 and 9.16 that read "A discount rate of 3 % and the lifetime of 30 years for retrofit and 40 years for new buildings have been assumed. Sources: Hermelink (2006), Galvin (2010), ETK (2011), Gardiner and Theobald (2011), Nieminen (2011), Energy Institute Vorarlberg (2013), PHI (2013), Harvey (2013)."	Clarification
9	38	10		Figure 9.14: Change x-axis label to "Energy Performance Improvement (Difference to Baseline) [kWh/m2/yr]"	Clarification
9	38	10		Figure 9.15: Change x-axis label to "Energy Performance Improvement (Difference to Baseline) [kWh/m2/yr]"	Clarification
9	38	10		Figure 9.16: Change x-axis label to "Energy Saving Relative to Baseline [%]" and changed axis values (0->0, 0.2->20%, ..., 1->100%).	Clarification
9	39	23		Example to clarify the computation of cost effectiveness ("For instance, a "Ppassive Hhouse" represents a factor of 10 – 20 improvement when compared to average building stocks; , whilebut only a fraction of this when compared to, for instance, upcoming German new building codes [...]"	Clarification
9	44	1		Figure 9.18, caption: add "from different provinces, countries and regions"	Clarification

9	44	1		Figure 9.18: Changed y-axis label to "Jobs Created per Money Spent (million jobs/USB2010)"	Clarification
9	45	4	7	replace "Somewhat higher rebound levels have been found for lower income groups (Roy, 2000; Hens et al., 2009), implying that efficiency contributes positively to energy service affordability and development goals which are often the purposes of efficiency policies in these countries." with "Somewhat higher rebound levels have been found for lower income groups (Hens et al. 2009; Roy 2000), implying that rebound contributes positively to energy service affordability and development."	Clarification
9	47	43	6 (p.48)	Deleted paragraph on examples for barriers as categories were not clearly defined and hence text not sufficiently precise. Some references added to p.47 l.34.	Clarification
9	48	20	21	replaced "(WBCSD, 2009; GPI, 2010; Harvey, 2010; WEO, 2011; Ürge-Vorsatz, Eyre, Graham, Harvey, et al., 20 2012; ETP, 2012; Laustsen, 2012)" with "Cornelissen et al. (2012), Deng et al. (2012a), Dowling et al. (2012), GPI (2010), Harvey (2010), IEA (2012c0a), Laustsen (2010), McNeil et al. (2013), Ürge-Vorsatz et al. (2012a3), WBCSD (2009), WEO (2011)", see bibliography of new chapter version for updates/correction of references	Error Correction
9	49	1		Figure 9.19: Added set sizes to legend;.	Clarification
9	49	19		Figure 9.19, caption: Added at end "Box plots show minimum, 25th percentile, median, 75th percentile and maximum. Sources: Cornelissen et al. (2012), Deng et al. (2012a), Dowling et al. (2012), GPI (2010), Harvey (2010), IEA (2012c0a), Laustsen (2010), McNeil et al. (2013), Ürge-Vorsatz et al. (2012a3), WBCSD (2009), WEO (2011) and WG III AR5 Scenario Database (Annex II.10)."	Clarification
9	50	3	4	Fig 9.20 split in 2 panels to improve accessibility	Clarification
9	50	8		replaced "Sources as indicated in Section 9.9.1" with "Sources: Cornelissen et al. (2012), Deng et al. (2012a), Dowling et al. (2012), GPI (2010), Harvey (2010), IEA (2012c0a), Laustsen (2010), McNeil et al. (2013), Ürge-Vorsatz et al. (2012a3), WBCSD (2009), WEO (2011) and WG III AR5 Scenario Database (Annex II.10)."	Clarification
9	51	1		Fig 9.21: 3CSEP data was missing for HC; data from same source was there for HCW already	Error Correction
9	51	4		replaced "Sources as indicated in Section 9.9.1" with "Sources: Cornelissen et al. (2012), Deng et al. (2012a), Dowling et al. (2012), GPI (2010), Harvey (2010), IEA (2012c0a), Laustsen (2010), McNeil et al. (2013), Ürge-Vorsatz et al. (2012a3), WBCSD (20	Clarification
9	51	4		Figure 9.20: Separated figure into two panels to improve readability, content stayed the same.	Clarification
9	52	1		Figure 9.21: Corrected label error, now baselines and advanced correctly labelled.	Error Correction
9	52	8		added at end of Fig.9.22 caption: "Source: WG III AR5 Scenario Database (Annex II.10)."	Clarification
9	53	10		corrected reference at end of Fig.9.23 caption to "Source: WG III AR5 Scenario Database (Annex II.10)."	Clarification
9	54	3		added reference at end of Fig.9.24 caption: "Source: WG III AR5 Scenario Database (Annex II.10)."	Clarification
9	54	4		Change in subtitle from "Conclusion and general observations" to "Summary and general observations"	Clarification
9	55	1		Figure 9.24: Changed label of right panel (now at bottom as vertically aligned) to "Mitigation Scenarios in 2050".	Clarification
9	57			deleted non-number references from the last column of Table 9.9	Clarification
9	65	10	11	Converted from 2010 EUR to 2010 USD	Consistency
9	All			references to "Herrero " in the chapter were changed to the correct lastname "Tirado Herrero ".	Clarification
9	All			All figures were replaced by versions produced by a graphic designer, while the content (e.g. the quantitative information) has been retained, colours and other graphical elements might have changed.	Consistency
10	4	6	6	replaced "options" with "strategies" and "carbon" with "emissions"	Consistency
10	4	7	7	replaced "switch changes" with "switching"	Consistency
10	4	8	9	moved 'longer life for products' to next parentheses	Consistency
10	4	15	15	corrected 2010 global industry and waste/wastewater GHG emissions from 15.5 to 15.4 GtCO ₂ eq	Error Correction
10	4	19	19	corrected waste/wastewater emissions from 1.5 to 1.4 GtCO ₂ eq	Error Correction
10	4	26	28	replaced "In 2010, over half (54%) of global GHG emissions from industry and waste/wastewater were from the ASIA region, followed by OECD1990 (25%), EIT (9%), MAF (7%), and LAM (5%)." with "In 2010, over half (52%) of global direct GHG emissions from industry and waste/wastewater were from the Asia region (ASIA), followed by the member countries of the Organisation for Economic Co-operation and Development in 1990 (OECD-1990) (25%), Economies in Transition (EIT) (9%), Middle East and Africa (MAF) (8%), and Latin America (LAM) (6%)."	Error Correction

10	4	28	31	replaced "GHG emissions from industry grew at an average annual rate of 3.6% globally, comprised of 7.4% average annual growth in the ASIA region, followed by MAF (4.3%) and LAM (1.9%), but declined in the OECD1990 (-1.3%) and the EIT (-0.3%) regions between 2005 and 2010." with "Between 2005 and 2010, GHG emissions from industry grew at an average annual rate of 3.5% globally, comprised of 7% average annual growth in the ASIA region, followed by MAF (4.4%), LAM (2%), and the EIT countries (0.1%), but declined in the OECD-1990 countries (-1.1%)."	Error Correction
10	5	7	7	replaced 'GHG' with 'climate change'	Consistency
10	5	9	14	replaced "Future demand of industrial products for GHG mitigation technologies and adaptation may increase, resulting in increasing industrial emissions (robust evidence, high agreement) [10.4, 10.6]. Producer demand from other sectors for GHG mitigation technologies (e.g. insulation materials for buildings) or adaptation measures (e.g. increased demand for infrastructure materials) contributes to industrial GHG emissions." with "Mitigation activities in other sectors and adaptation measures may result in increased industrial product demand and corresponding emissions (robust evidence, high agreement). Production of mitigation technologies (e.g., insulation materials for buildings) or material demand for adaptation measures (e.g., infrastructure materials) contribute to industrial GHG emissions. [10.4, 10.6]"	Clarification
10	5	20	20	replaced "Cooperation and cross-sectoral collaboration" with "Collaboration within and across industrial sectors"	Clarification
10	5	25	25	deleted " that contribute to mitigation"	Clarification
10	5	26	26	replaced "Options for emission reduction exist in the industrial sector that are estimated to be profitable" with "Several emission-reducing options in the industrial sector are cost-effective and profitable"	Clarification
10	5	28	28	replaced "0-20 and 20-50 USD/tCO2eq" with "20–50, 0–20, and even below 0 USD2010/tCO2eq"	Error Correction
10	5	35	35	replaced "options" with "measures"	Consistency
10	6	1	1	replaced "options" with "measures"	Consistency
10	6	4	6	deleted "There is a lack of experience and often there are no clear incentives either for suppliers or consumers to address improvements in material or product service efficiency."	Clarification
10	6	7	7	replaced "material efficiency or product service intensity" with "material or product service efficiency"	Clarification
10	6	17	17	replaced "option" with "strategy"	Consistency
10	6	18	18	Inserted 'integrated' behind 'long term'	Clarification
10	6	35	35	replaced "mitigation" with "reduction"	Clarification
10	7	15	16	inserted "based on Bajželj et al. (2013)."	Clarification
10	7	28	28	deleted "(totalling 49.5 GtCO2eq)"	Consistency
10	9	11	12	Replaced 'GHG emissions' with 'climate change'	Consistency
10	10	7	7	Figure 10.3: inserted y-axis label "Relative growth [1970=1]"	Clarification
10	12	16	17	Replaced "Global industry and waste/wastewater GHG emissions grew from 10.42 GtCO2eq in 1990 to 12.98 GtCO2eq in 2005 to 15.51 GtCO2eq in 2010." with "Global industry and waste/wastewater GHG emissions grew from 10.37 GtCO2eq in 1990 to 13.04 GtCO2eq in 2005 to 15.44 GtCO2eq in 2010."	Error Correction
10	12	32	33	replaced "Over half (54%) of global GHG emissions from industry and waste/wastewater are from the ASIA region, followed by OECD1990 (25%), EIT (9%), MAF (7%), and LAM (5%)." with "Over half (52%) of global direct GHG emissions from industry and waste/wastewater are from the ASIA region, followed by OECD-1990 (25%), EIT (9.4%), MAF (7.6%), and LAM (5.7%)"	Error Correction
10	12	34	36	replaced "GHG emissions from industry grew at an average annual rate of 3.6% globally, comprised of 7.4% average annual growth in the ASIA region, followed by MAF (4.3%) and LAM (1.9%), but declined in the OECD1990 (-1.3%) and the EIT (-0.3%) regions between 2005 and 2010." with "Between 2005 and 2010, GHG emissions from industry grew at an average annual rate of 3.5% globally, comprised of 7.0% average annual growth in the ASIA region, followed by MAF (4.4%), LAM (2.0%), and the EIT countries (0.1%), but declined in the OECD-1990 countries (-1.1%)."	Error Correction
10	13	6	6	Data for figure 10.4 was corrected	Error Correction
10	13	8	8	added "/yr" to unit: (GtCO2eq/yr)	Clarification
10	14	1	1	Data for figure 10.5 was corrected	Error Correction
10	14	4	4	added "/yr" to unit: (GtCO2eq/yr)	Clarification
10	15	4	5	Data corrections, deleted final energy columns	Error Correction
10	15	7	9	deleted "Energy use for mining and quarrying is not included in the final and primary energy values; CO2 emissions from mining and quarrying, which are estimated to be less than 3% of total industry emissions, are not included due to data limitations."	Error Correction
10	16	2	2	Data for Table 10.3 was corrected	Error Correction
10	17	35	36	changed "In the period 1990-2005, fluorinated gases (F-gases) were the most important non-CO2 GHG source in manufacturing industry." to "In the period from 1990–2010, fluorinated gases (F-gases) and N2O were the most important non-CO2 GHG emissions in manufacturing industry."	Error Correction
10	19	34	34	replaced "emissions" with "climate change"	Clarification
10	21	1	2	replaced "CO2 sequestration" with "Carbon dioxide capture and storage (CCS)"	Consistency

10	21	12	12	replaced "from 200 to 118 MtCO ₂ eq" with "almost by half"	Consistency
10	30	8	11	Replaced "In order to maintain a constant total demand for meat and dairy, Garnett (2009) suggests that by 2050 average per capita consumption should be around 25kg meat and 50 litres of milk per week, which is around four times less than current averages in developed economies." with "In order to maintain a constant total demand for meat and dairy, Garnett (2009) suggests that by 2050 average per capita consumption should be around 0.5 kg meat and 1 litre of milk per week, which is around the current averages in the developing world today."	
10	31	27	27	Replaced 'GHG' with 'climate change'	Clarification
10	32	36	36	Replaced 'GHG' with 'climate change'	Clarification
10	35	11	11	Figure 10.6: Adjusted values to USD2010	Consistency
10	35	12	12	Replaced USD with USD2010	Clarification
10	35	30	30	Replaced 'GHG' with 'climate change'	Clarification
10	38	17	17	replaced 2008 USD with USD2010	Consistency
10	38	19	23	replaced "To ensure consistency with that chapter, the choice has been made to include indirect emissions related to electricity use in the industrial sector using an electricity emission factor of 0.394 kg CO ₂ /kWh (calculated on the basis of a natural gas combined cycle with an efficiency of 55%) and not give any cost estimates for the costs related to decarbonising the electricity mix for the industrial sector." with "Potentials and costs to decarbonize the electricity sector are covered in Chapter 7. To ensure consistency with that chapter, no estimates are given for the costs related to decarbonizing the electricity mix for the industrial sector."	Error Correction
10	39	12	13	Deleted: For CCS, the IEA GHG (2008) estimates CCS abatement cost at 63 to 170 USD/tCO ₂ avoided.	Consistency
10	40	5	5	Deleted: Notes: For CCS, abatement cost of 40 to 60 USD/tCO ₂ avoided are given in IEA (2009c).	Consistency
10	40	6	6	Fig. 10.9: Indicative Cost of Conserved Carbon expressed in Dollar per CO ₂ equivalents: [USD2010/tCO ₂ eq]	Clarification
10	46	6	7	Delete 'air' in 'technical energy efficiency category' in last column	Error Correction
10	46	7	7	Table 10.5, 3rd column, bottom cell: Deleted "Local conflicts through inequity in consumption" and replaced "New diverse lifestyle concept" with "Wellbeing via new diverse lifestyle choices"	Error Correction
10	47	17	17	deleted "(E/M)"	Consistency
10	48	1	1	deleted "(G/E)"	Consistency
10	48	15	15	deleted "(M/P)"	Consistency
10	48	24	24	deleted "(P/S)"	Consistency
10	48	40	40	deleted "(G/E)"	Consistency
10	53	1	1	Figure 10.11: replaced y-axes labels with: a) Relative Change in Final Energy [2010=1] b) Relative Change in Direct plus Indirect Emissions [2010=1] c) Relative Change in Emission Intensity [2010=1]	Clarification
10	53	10	11	replaced "whiskers show the full range of scenarios including an additional 408 alternate economic, resource, and technology assumptions" with "white bars show the full range of scenarios including an additional 408, with alternate economic, resource, and technology assumptions"	Clarification
10	53	13	13	inserted reference: Source: WG III AR5 Scenario Database, see Annex II.10	Clarification
10	54	1	1	Figure 10.12: changed y-axis label to: Relative Change in Final Energy [2010=1]	Clarification
10	54	7	7	inserted reference: Source: WG III AR5 Scenario Database, see Annex II.10	Clarification
10	54	8	8	Figure 10.13: added heading : Shares of Carriers in Final Energy in Industry	Clarification
10	55	2	2	inserted reference: Source: WG III AR5 Scenario Database, see Annex II.10	Clarification
10	55	3	3	Figure 10.14: Replaced both y-axes-labels with: Mitigation Potential [MtCO ₂ eq/yr]	Clarification
10	56	8	8	deleted "(E/M)"	Consistency
10	57	25	25	replaced "rate equivalent to 1.6-2.1 USD/tCO ₂ (Gruber, E. et al., 2011)" with "cost to the German government of 2.4-5.7 USD2010/tCO ₂ (Fleiter et al., 2012c)"	Error Correction
10	58	3	3	replaced "61 USD/t-CO ₂ (Kimura, 2009)" with "65 USD2010/tCO ₂ (Kimura and Noda, 2010)"	Error Correction
10	58	23	23	deleted "(G/E)"	Consistency
10	58	39	39	deleted "(M/P)"	Consistency
10	60	21	27	corrected answer to: Global direct industry and waste/wastewater GHG emissions grew from 10 GtCO ₂ eq in 1990 to 13 GtCO ₂ eq in 2005 to 15 GtCO ₂ eq in 2010. Over half (52%) of global GHG emissions from industry and waste/wastewater are from the ASIA region, followed by OECD-1990 (25%), EIT (9%), MAF (8%), and LAM (6%). GHG emissions from industry grew at an average annual rate of 3.5% globally between 2005 and 2010. This included 7% average annual growth in the ASIA region, followed by MAF (4.4%) and LAM (2%), and the EIT countries (0.1%), but declined in the OECD-1990 countries (-1.1%).	Error Correction
10	60	31	31	corrected waste/wastewater emissions from 1.5 to 1.4 GtCO ₂ eq	Error Correction

10	64	1	1	Replaced y-axes labels. Left: GHG Emissions [MtCO ₂ eq/yr] Right: Waste Emissions Index [1970=1]; changed text in right legend box: Waste Emissions per Capita Waste Emissions/GDP Total	Clarification
10	69	49	49	replaced 'mitigation' with 'reduction'	Error Correction
10	70	13	13	replaced "Nine" with "Six"	Error Correction
10	70	25	27	Replaced "limited to" with "focused on" and "incineration" with "composting"	Error Correction
10	70	27	28	Deleted "For technologies that reduce waste, a standard factor from the IPCC 2006 guidelines for N ₂ O was applied."	Error Correction
10	70	38	38	Fig. 10.19: Indicative Cost of Conserved Carbon expressed in Dollar per CO ₂ equivalents: [USD2010/tCO ₂ eq]	Clarification
10	71	3	3	changed "500 USD/tCO ₂ eq" to "590 USD2010/tCO ₂ eq"	Error Correction
10	71	14	14	Fig. 10.20: Indicative Cost of Conserved Carbon expressed in Dollar per CO ₂ equivalents: [USD2010/tCO ₂ eq]	Clarification
10	71	30	31	replaced "of GHG mitigation" with "on GHG emissions"	Clarification
11	2	27	27	Changed Heading "11.5.5 Mitigation and adaptation synergies and risk-tradeoffs" to "11.5.5 Mitigation and adaptation synergies and tradeoffs"	Consistency
11	3	1	1	changed heading "11.7.4 Spillover effects" to "11.7.4 Spillovers"	Consistency
11	3	21	21	replaced 11.13.2 heading "Technical primary biomass potential for bioenergy" with "Technical bioenergy potential"	Consistency
11	4	10	10	replaced 'greenhouse gas' with 'climate change'	Clarification
11	4	13	13	replaced '(~9-12 Gt CO ₂ eq/yr)' with '(~10-12 GtCO ₂ eq/yr)'	Error Correction
11	4	25	25	added uncertainty qualifier to deforestation statement	Consistency
11	4	44	44	deleted "risk-" in "risk-tradeoffs"	Consistency
11	5	10	14	replaced "AFOLU forms a significant component of mitigation in transformation pathways, offering a variety of mitigation options and a large, cost-competitive mitigation potential [limited evidence; medium agreement]. Recent multi-model comparisons have found that all land-related mitigation strategies (agriculture, forestry, bioenergy) were projected to contribute 20 to 60% of total cumulative abatement to 2030, and still 15 to 45% to 2100 [11.9]." with "AFOLU emissions could change substantially in transformation pathways, with significant mitigation potential from agriculture, forestry, and bioenergy mitigation measures (medium evidence; high agreement). Recent multi-model comparisons of idealized implementation transformation scenarios find land emissions (nitrous oxide, N ₂ O; methane, CH ₄ ; CO ₂) changing by -4 to 99% through 2030, and 7 to 76% through 2100, with the potential for increased emissions from land carbon stocks. Land-related mitigation, including bioenergy, could contribute 20 to 60% of total cumulative abatement to 2030, and 15 to 40% to 2100. However, policy coordination and implementation issues are challenges to realizing this potential [11.9]."	Error Correction
11	5	14	14	replaced "energy generation" with "biomass supply for energy"	Clarification
11	5	21	21	replaced 'climate management' with 'mitigation'	Consistency
11	5	22	22	replaced 'mitigation' with 'reduction'	Consistency
11	5	28	28	replaced "(full range: 0.49-13.78)" with "(full range: 0.49-10.60)"	Error Correction
11	5	41	41	replaced "REF" with "Economies in Transition (EIT)"	Consistency
11	5	44	45	replaced "(0.76-9.31 Gt CO ₂ eq/yr by 2050)" with "(0.76-8.55 Gt CO ₂ eq/yr by 2050)"	Error Correction
11	6	24	24	replaced 'stabilizing climate change' with 'for climate change mitigation'	Consistency
11	6	27	27	Replaced 'assessments' with 'models'	Consistency
11	6	35	35	replaced 'bottom-up' with 'sectoral'	Consistency
11	6	35	35	replaced "in combination with" with "including"	Error Correction
11	6	37	37	replaced "of 2.7 billion rural inhabitants" with "of 2.6 billion rural inhabitants"	Consistency
11	8	5	5	replaced 'risk-tradeoffs, uncertainty and spill-overs' with 'adverse side-effects'	Error Correction
11	9	28	29	replaced "REF" with "Economies in Transition (EIT)"	Consistency
11	10	7	7	Figure 11.2a: replaced y-axis label with "Average Annual GHG Emissions [GtCO ₂ eq/yr]	Clarification
11	10	14	14	Figure 11.2a: inserted FAOSTAT data for emissions from drained peat and peat fires for the 1990s and the 2000s	Consistency
11	11	2	2	corrected region labels for indirect emissions in figure 11.2b	Error Correction
11	11	8	9	replaced "Emissions from drained peat and peat fires are from JRC/PBL (2012), derived from Hooijer et al. (2010) and van der Werf et al. (2006);" with "Emissions from drained peat and peat fires are, for the 1970s and the 1980s, from JRC/PBL (2012), derived from Hooijer et al. (2010) and van der Werf et al. (2006); and for the 1990s and the 2000s, from FAOSTAT (2013)"	Consistency
11	11	14	14	changed "net CO ₂ flux" to "CO ₂ flux from anthropogenic emission sources in"	Error Correction
11	12	2	2	Figure 11.3: changed labels "REF" to "EIT" and "Asia" to "ASIA", replaced y-axes labels: top panel, left: Area of Land Use [1000 Mha]; top panel, right: N Fertilizers Application [Million t]; bottom panel, left: Animals [Million Heads]; bottom panel, right: Poultry [Billion Heads]	Clarification
11	13	17	17	Figure 11.4: revised to add N ₂ O and CH ₄ emissions from MMS	Clarification
11	15	3	3	Figure 11.5: changed labels "REF" to "EIT" and "Asia" to "ASIA"	Consistency
11	18	7	7	Figure 11.7: changed label "REF" to "EIT"	Consistency

11	19	1	1	Figure 11.8: Added "Afforestation" to both "-0.06" data labels	Clarification
11	27	3	3	replaced "of around 3 billion people" with "of around 2.6 billion people"	Consistency
11	32	1	1	Figure 11.9: Added to legend "Values in Gt dry matter biomass/yr"	Clarification
11	34	37	37	Replaced 'GHG mitigation options' with 'mitigation measures'	Consistency
11	36	1	1	Figure 11.10: Changed y-axes-labels to "Biomass Use Efficiencies for Beef [kg Feed/kg Protein] (top) and "Biomass Use Efficiencies for Milk [kg Feed/kg Protein]" (bottom); introduced sub-headings in the legend box: "Grazing" (left), "Mixed Crop-Livestock" (right)	Clarification
11	38	33	33	replaced "GHG" with "climate change"	Consistency
11	42	20	20	changed "risk tradeoffs" to "tradeoffs"	Consistency
11	42	23	23	changed "risk tradeoffs" to "tradeoffs"	Consistency
11	44	43	43	Changed Heading "11.5.5 Mitigation and adaptation synergies and risk-tradeoffs" to "11.5.5 Mitigation and adaptation synergies and tradeoffs"	Consistency
11	45	37	37	replaced "GHG" with "climate change"	Consistency
11	48	1	1	Figure 11.14: corrected value for Smith et al., 2013: Diet and all measures from 9.31 to 8.55	Consistency
11	48	19	19	Figure 11.13: Added "Mitigation Potential" to y-axis labels.	Clarification
11	49	1	1	Figure 11.14: Added "Mitigation Potential" to y-axis label	Clarification
11	49	17	17	changed "Technical potential only" for "Demand-side options" from 0.76-9.31 to 0.76-8.55	Error Correction
11	50	5	5	Figure 11.15: Added "GHG Emissions Intensities" to y-axis label	Clarification
11	52	8	8	Figure 11.17: changed label "REF" to "EIT", added "Economic Mitigation Potential" to y-axis label	Consistency
11	53	1	1	Figure 11.18: changed label "REF" to "EIT"	Consistency
11	60	36	36	changed heading "11.7.4 Spillover effects" to "11.7.4 Spillovers"	Consistency
11	63	26	26	replaced "transformation scenario" with "mitigation scenario"	Consistency
11	63	34	34	replaced "mitigation represents" with "changes can represent"	Consistency
11	63	38	38	inserted "Note that bioenergy-related mitigation is not captured in Table 11.10."	Clarification
11	64	10	10	inserted "In total, land-related strategies contributed 20 to 60% of total cumulative abatement to 2030, 15 to 70% to 2050, and 15 to 40% to 2100."	Consistency
11	64	18	18	added "For additional discussion of land's potential role in transformation pathways, especially regarding physical land-use and bioenergy, see Sections 6.3.2.4 and 6.3.5."	Clarification
11	64	23	23	inserted "Bioenergy-related mitigation is not captured in the table."	Clarification
11	64	24	24	Table 11.10: Added sums for "Cumulative global land-related emissions reductions (GtCO ₂ eq)", "Land reductions share of total global emissions reductions", and "Percent of baseline land emissions reduced"	Clarification
11	65	38	38	replaced "transformation scenario" with "mitigation scenario"	Consistency
11	66	2	2	Figure 11.19: changed labels "Ref. Econ." to "EIT", "ME&Africa" to "MAF", "Latin America" to "LAM", "Asia" to "ASIA"	Consistency
11	66	15	15	replaced "REF" with "EIT"	Consistency
11	67	29	29	replaced "greenhouse gas" with "climate change"	Consistency
11	77	24	24	replaced 11.13.2 heading "Technical primary biomass potential for bioenergy" with "Technical bioenergy potential"	Consistency
11	77	25	27	replaced sentence "The technical primary biomass potential for bioenergy –from here on referred to as 'technical bioenergy potential'- is the fraction of the theoretical potential (i.e., the theoretical maximum amount of biomass constrained only by biophysical limits) available with current technology." with "The technical bioenergy potential, also known as the technical primary biomass potential for bioenergy, is the amount of the theoretical bioenergy output obtainable by full implementation of demonstrated technologies or practices (IPCC, 2011)."	Consistency
11	78	8	8	replaced "primary biomass" with "bioenergy"	Consistency
11	78	10	10	replaced "Global Technical Primary Biomass Potential for Bioenergy " with "Global Technical Bioenergy Potential"	Consistency
11	80	11	11	replaced "the cooking and heating needs of ~2.7 billion people (Chum et al, 2011, WHO, 2012)" with "the cooking needs of ~2.6 billion people (Chum et al., 2011; IEA, 2012b)"	Consistency
11	84	1	1	Figure 11.22: Added "ALCA GHG Emissions" to the units at both y-axes; replaced first legend box entry with "Fossil Combustion CO ₂ Ventd"	Clarification
11	85	39	40	deleted "Reforestation schemes have potential to restore soil quality and increase soil carbon stocks over time (Wicke et al., 2013). "	Consistency
11	89	6	6	Figure 11.23: Added "ALCA GHG Emissions" to y-axis label	Clarification
11	93	1	1	Figure 11.24: Added "per Unit Fuel Produced" to y-axes-label, deleted references numbering	Clarification
11	94	39	39	replaced "transformation scenario" with "mitigation scenario"	Consistency
11	95	28	28	replaced "assessments" with "models"	Consistency
11	96	44	45	replaced "IEA (2011) estimates that 2.7 billion people worldwide depend on traditional biomass for cooking and heating, while 84% of these belong to rural communities." with "IEA (2012b) estimates that 2.6 billion people worldwide depend on traditional biomass for cooking, while 84% of these belong to rural communities."	Consistency
12	4	2		corrected use of uncertainty language in ES	Clarification
12	4	12	15	deleted 2 redundant sentences	Clarification
12	4	15	15	changed confidence statement	Consistency

12	4	15		added "Urbanization is associated with increases in income, and higher urban incomes are correlated with higher consumption of energy use and GHG emissions (medium evidence, high agreement)" and reference to Section 12.3 at end of paragraph	Clarification
12	5	22	22	rephrase	Clarification
12	5	31	31	rephrase and spelling	Clarification
12	6	1	3	changed "The largest opportunities for future urban GHG emissions reduction might be in rapidly urbanizing countries where infrastructure inertia has not set in; however, the required governance, technical, financial, and institutional capacities can be limited" to "The largest opportunities for future urban GHG emissions reduction are in rapidly urbanizing areas where urban form and infrastructure are not locked-in, but where there are often limited governance, technical, financial, and institutional capacities."	Clarification
12	6	7	8	changed "Thousands of cities are undertaking climate action plans, but the extent of urban climate mitigation is highly uncertain" to "Thousands of cities are undertaking climate action plans, but their aggregate impact on urban emissions is uncertain"	Clarification
12	6	38		added after bold statement "Urban areas throughout the world continue to struggle with challenges, including ensuring access to energy, limiting air and water pollution, and maintaining employment opportunities and competitiveness. Action on urban-scale mitigation often depends on the ability to relate climate change mitigation efforts to local co-benefits. "	Clarification
12	6	39	40	rephrase	Clarification
12	7	3	3	rephrase and spelling	Consistency
12	8	23	23	spell out acronym	Clarification
12	9	25	25	rephrase	Clarification
12	9	38	38	rephrase	Clarification
12	9	39	39	units	Clarification
12	10	46	46	rephrase	Clarification
12	12	15	15	add caption	Clarification
12	12	26	26	rounding number	Consistency
12	13	13	14	Figure 12.3, caption: Changed "Average Built-Up Area per Person (m2) in 1990 (red) and 2000 (green) for 120 Cities. Average annual percent change in density (blue, secondary x-axis)." to "Left: Average annual percent change in density between 1990 and 2010 (light blue). Right: Average built-up area per person (m2) in 1990 (yellow) and 2000 (blue). Data from 120 cities."	Clarification
12	15	13	13	spelling of units	Consistency
12	16	20	20	rephrase	Clarification
12	17	14	14	rephrase	Clarification
12	17	27	27	add "six"	Clarification
12	18	4	12	units	Consistency
12	19	3		Figure 12.5, caption: Added after "England": " in 2004. The extended territorial CO2 emissions accounts assign CO2 emissions from electricity consumption to each municipality's energy use. The consumption-based carbon footprint accounts assign all emissions from the production of goods and services in the global supply chain to the municipality where final consumption takes place".	Clarification
12	21	1	1	new text	Clarification
12	22	12	12	new text	Clarification
12	22	24	24	new acronym	Clarification
12	23	5	6	new text	Clarification
12	23	25	26	next text	Clarification
12	24	6	6	units	Consistency
12	24	38	38	added (GRP)	Clarification
12	25	2	3	technology, infrastructure and form -- unbolded terms and used single quotes	Clarification
12	25	39	40	removed "e.g the case study of ... for Tunisia" from citation	Clarification
12	26	3		added reference to "Grubler et al., 2012" as the figure in this format is taken from that report	Clarification
12	26	24	27	deleted: ". This was first formulated for macro-economic growth accounts (from which the IPAT identity is conceptually derived) by Abramovitz (1993) who emphasized the coevolution and interdependence of the income and technology variables in the IPAT identity. "	Clarification
12	28	7	7	added text: This section assesses the relative importance of the GHG drivers in different urban contexts such as size, scale, and age, and examines the differences between cities in developed and developing countries.	Clarification
12	35	24	2	"This underscores that the production of infrastructure materials such as concrete and metals rely heavily on fossil-fuel combustion, which is predicted to contribute 496 Gt of CO2 between 2010 and 2060 (from a range of 282 to 701 Gt of CO2) (Cole, 1998; Horvath, 2004; Allwood et al., 2010; Davis et al., 2010). The continued expansion of infrastructure would produce cumulative emissions of 3000 to 7400 Gt of CO2 from now." to "This is in addition to the "committed emissions" from existing energy and transportation infrastructure, estimated to be in the range of 282 to 701 Gt of CO2 between 2010 and 2060 (Davis et al., 2010). Under scenarios of continued expansion of infrastructure, cumulative emissions would be between 3000 to 7400 Gt of CO2 from 2010"	Consistency

12	35	24	27	Replaced "This underscores that the production of infrastructure materials such as concrete and metals rely heavily on fossil-fuel combustion, which is predicted to contribute 496 Gt of CO2 between 2010 and 2060 (from a range of 282 to 701 Gt of CO2) (Cole, 1998; Horvath, 2004; Allwood et al., 2010; Davis et al., 2010). The continued expansion of infrastructure would produce cumulative emissions of 3000 to 7400 Gt of CO2 from now through the end of this century, which would lead to 1 atmospheric concentrations greater than 600 ppm" with "This is in addition to the "committed emissions" from existing energy and transportation infrastructure, estimated to be in the range of 282 to 701 Gt of CO2 between 2010 and 2060."	Clarification
12	36	28		Figuer 12.13, caption: At end before reference added " Numbers in panels show the cumulated CO2 emissions from 2010 to 2060 in Gt."	Clarification
12	37	16	18	Metric conversion. From "In the U.S., households located in relatively low density areas (0-50 households per square mile) produce twice as much GHG emissions as households located in relatively high density areas (5,000 -9,999 households per square mile)" to "In the United States, households located in relatively low density areas (0–19 households/km2) produce twice as much GHG emissions as households located in relatively high density areas (1,900 –3,900 households/km2) "	Consistency
12	37	21		added "The dark blue row segments under the VKT elasticities column provide the range of elasticities for the studies included."	Clarification
12	38	20	21	from "Although the dominant trend is declining density..." to "The dominant trend is declining density, however..."	Consistency
12	41	26	27	from "There are a number of reasons for this: distances tend to be shorter and the system of small blocks promotes convenience and walking" to "Two main reasons for this are that distances tend to be shorter and the system of small blocks promotes convenience and walking"	Clarification
12	42	5	6	deleted duplicate sentence: "In a rapidly motorising city of Santiago de Chile, proximity to the central business district as well as metro stations has a relatively strong association with VKT (Zegras, 2010). "	Clarification
12	42	46	48	Changed "For example, the city of Cape Town has set a target of increasing energy efficiency within the municipality by 12% by 2010 (Holgate, 2007), and Mexico City has implemented a target of reducing GHG by 12% below 1990 levels by 2012 (Romero Lankao, 2007)." to "For example, the city of Cape Town has set a target of increasing energy 46 efficiency within the municipality by 12% by 2010 (Holgate, 2007), and Mexico City has implemented and achieved a target of reducing 7 million tons of GHG from 2008 to 2012 (Delgado-Ramos, 2013)."	Error Correction
12	43	35	38	1st sentence of second bullet "Market Drivers..." moved to "Primary drivers" bullet	Clarification
12	44	13	14	"Excessive" has been changed to "Outdated or poorly designed"	Consistency
12	44	34	35	deleted "Scale is a particularly important determinant of success."	Error Correction
12	45	2	2	"They" to "Urban containment"	Consistency
12	45	39	39	added "UK": and Washington, "UK"	Clarification
12	47	21	21	"necklace of pearls" to 'necklace of pearls'	Consistency
12	47	45	48	"is invariably" has been changed to "can often be"	Consistency
12	48	49	1	deleted "as well," added "TOD is also being implemented in Asian cities, such"	Clarification
12	48	49	49	"Kaohsiung, Taiwan" has been changed to "Kaohsiung"	Consistency
12	49	6	9	text moved from end of sentence to beginning: "not all have succeeded. TOD efforts in many Chinese cities have been undermined by a"	Clarification
12	51	20	22	"to constrain car use or increase the cost of driving as well as to reduce the amount of urban land devoted to vehicle infrastructure" has been replaced with "to reduce the costs of development, use urban land efficiently, and encourage alternate transportation modes."	Consistency
12	51	37	37	deleted "see 12.2.1.2"	Consistency
12	51	46	46	added text: and "Floor Area Ratio" (FAR)	Clarification
12	52	15	15	"Hong Kong" has been changed to "Hong Kong SAR, China"	Consistency
12	59	19		Figure 12.20: Change text in 2nd green box from the top from "Air Right Sale/Tradeable Development Rights" to "Air Right Sale / Transfer of Development Rights".	Error Correction
12	62	8		added reference ("Section 9.7.3 in this report as well as"	Clarification
12	66	17		added "increased" to "Health from physical activity" after "from"	Clarification
12	67	14	14	Rewording	Clarification
12	67	17		removed "Geng, Ma et al. 2013"	Error Correction
12	67	32	32	Rewording	Clarification
12	68	21	21	Rewording	Clarification
12	69	3	3	Rewording	Clarification
12	71	24	25	changed "Akbari H., A. Rosenfeld, and M. Elliot (2010). Global Cooling: Policies to Cool the World and Offset 24 Global Warming from CO2 Using Reflective Roofs and Pavements." to "Akbari, H. and H.D. Matthews (2012). Global cooling updates: Reflective roofs and pavements. Energy and Buildings 55, 2-6. doi: 10.1016/j.enbuild.2012.02.055"	Error Correction
12	81	20		added reference "Tisdale, H. (1942) The process of urbanization. Social Forces 20 (3) , 311 pp."	Clarification

12	82	18		inserted further reference: "Delgado-Ramos, G.C. (2013). Climate change and metabolic dynamics in Latin American major cities, in: Zubir, S.S. and Brebbia, C.A. Sustainable City VIII. WIT Press. Southampton, UK. pp. 39-53. ISBN. 978-1-84564-746-9."	
12	83	3		added missing bibliography entries: "Doll C. N. H. (2009). Spatial Analysis of the World Bank's Global Urban Air Pollution Dataset. International Institute for Applied Systems Analysis, Laxenburg, Austria. Doll C. N. H., and S. Pachauri (2010). Estimating rural populations without access to electricity in developing countries through night-time light satellite imagery. Energy Policy 38, 5661 – 5670. doi: 10.1016 / j.enpol.2010.05.014, ISSN: 0301-4215. Doll C.N., M. Dreyfus, S. Ahmad, O. Balaban (2013). Institutional framework for urban development with co-benefits: the Indian experience. Journal of Cleaner Production 58, 121-129. doi: 10.1016/j.jclepro.2013.07.029."	Clarification
12	86	12	13	deleted this reference as not referred to from the text anymore	Clarification
12	92	9	10	deleted this reference as not referred to from the text anymore	Clarification
13	5	36		include '5' after '13.' to read and refer to section 13.5	Error Correction
13	6	1	3	Clarified that the term "climate benefits" refers to "climate change mitigation and adaptation benefits"	Clarification
13	6	17		replace '13.1' with '13.14' as the last entry in square brackets	Error Correction
13	6	38	41	Replace 'Mitigation pledges by individual countries in the Copenhagen- Cancún regime, if fully implemented, will help reduce emissions to below the business-as-usual level in 2020, but are unlikely to attain an emission level by 2020 consistent with a trajectory that achieves the long-term 2°C goal.' with 'Mitigation pledges by individual countries in the Copenhagen-Cancún regime, if fully implemented, will help reduce emissions in 2020 to below the projected business-as-usual level, but are unlikely to attain an emission level in 2020 consistent with cost-effective pathways, based on the immediate onset of mitigation, that achieve the long-term 2 °C goal with a greater than 50 % probability.'	Clarification
13	6	43	3	Revised the finding to be consistent with language used in the TS. Replaced the text "not been as successful as intended" with more specific and qualified language based on the underlying chapter. Added a citation to Section 5.2.	Consistency
13	7	4	4	Replaced "flexibility mechanism" with "flexible mechanism" to match language in the chapter and TS	Consistency
13	7	7	8	Updated the number of CDM credits generated to a more current number to match the underlying chapter and TS	Consistency
13	7	16	25	Revised with language that better matches the underlying chapter and TS (i.e. clarifying commitments vs. contributions, funding vs. finance and technology). Added in a new sentence about the Durban Platform supported by the underlying chapter and TS	Consistency
13	16	3		Figure 13.1 caption: Inserted revised caption for clarification: The landscape of agreements and institutions on climate change. Lines connecting different types of agreements and institutions indicate different types of links. In some cases, lines represent a formal agreement of a division of labour (e.g. between the UNFCCC and ICAO concerning aviation emissions). In other cases, lines represent a more simple mutual recognition (e.g. the accreditation of C40 cities by the UNFCCC). In others still, lines represent a functional linkage without any formal relationship (e.g. the relationship between the CDM and the NGO certification of carbon offsets). This is a rapidly-changing landscape and not all links may be captured.	Clarification
13	19	22		Correct references and include missing ref (Finus and Pintassilgo, 2012, 2013)	Error Correction
13	22	9		Figure 13.2: Changes to figure made for clarity and consistency: - Deletion the box of Global Carbon Tax, because such an architecture does not really arise in the literature and is infeasible. - Deletion of the box on Border Tax Adjustments, because this is not a form of international cooperation, but a unilateral national policy instrument. - Deletion of the box on Investor Governance Initiatives, because the meaning and location of this box was unclear and it is not a form of international cooperation. - Elimination of the word National from National/Regional ETS Linkages, and change of this box to Regional ETS (which refers to the EU ETS). - Addition of Linked Cap and Trade Systems to the box on Harmonized Carbon Taxes. - Deletion of the 2 degrees goal, because it is still in process. - Vertical realignment of some of the boxes. - Exchange of the colors of existing and proposed architectures, so that greater emphasis is given to existing forms of cooperation.	Clarification

13	22	14		Figure 13.2, caption: Replaced with the following sentence: 'Alternative forms of international cooperation. The figure represents a compilation of existing and possible forms of international cooperation, based upon a survey of published research, but is not intended to be exhaustive of existing or potential policy architectures, nor is it intended to be prescriptive. Examples in orange are existing agreements. Examples in blue are structures for agreements proposed in the literature. The width of individual boxes indicates the range of possible degrees of centralization for a particular agreement. The degree of centralization indicates the authority an agreement confers on an international institution, not the process of negotiating the agreement.'	Consistency
13	42	1		Figure 13.4: Legend entries were corrected for clarity and consistency, which entailed a re-categorization of the following countries: Belize, Bosnia and Herzegovina, Brunei Darussalam, Cambodia, China, Colombia, Costa Rica, Cyprus, Ethiopia, Hong Kong, India, Kazakhstan, Kenya, Macao, Malaysia, Maldives, Mexico, Montenegro, Namibia, Palau, Peru, Philippines, San Marino, Singapore, Sri Lanka, Taiwan and Thailand. Furthermore, South Sudan was added as a country and the categorization of some US Dependencies was adjusted. Finally, proposed links between ETS were updated and information on the acceptance of CDM credits in different ETS was included.	Consistency
13	42	2		Figure 13.4 caption: Added the following sentences: 'Linkage through proposed acceptance of offsets and Joint Implementation projects not displayed. In some cases, countries otherwise eligible to host CDM projects must first establish a Designated National Authority. Accurate as of March 2014.'	Consistency
13	58	2		Table 13.3 caption: Insert 'climate change' to read: 'Summary of performance assessments of existing cooperation of proposed cooperation on climate change.'	Clarification
13	58	2		Table 13.3: Moved 'Existing Cooperation [13.13.1]' entry into the first row to sit next to 'UNFCCC'; inserted 'GHG' in the third column, 'Kyoto Protocol' row to read: 'Aggregate GHG emissions...'; replaced 'July' by 'October' in the third column, 'The Kyoto Mechanisms' row; inserted 'GHG' in the third column, 'Further Agreements under the UNFCCC' row to read: 'limit GHG emissions...' and moved the word 'cost-effectively' to read: 'Unlikely sufficient to limit temperature change to 2°C cost-effectively.'; inserted 'GHG' in the third column, 'G8, G20, MEF' row to read: 'recommended GHG emission reduction...'; inserted 'GHG' in the third column, 'Montreal Protocol on Ozone-Depleting Substances (ODS)' row to read: 'Spurred GHG emission reductions...'	Clarification
13	58			Table 13.3: removed the bracket (II) from the second row on the UNFCCC and its Aggregate Economic Performance; also replaced the term 'implementation' with the correcter word 'fulfilment'	Error Correction
13	62	46		Replace '13.5.1.1' with '13.7.2'.	Error Correction
13	65	18		Replace 'insufficient to achieve a 2°C target, resulting in a so-called' with 'inconsistent with cost-effective mitigation scenarios, which are based on the immediate onset of mitigation that maintain temperature change below 2°C target with a greater than 50% probability (see Section 6.4 for detail on these scenarios).; The difference between the emissions in 2020 in immediate mitigation pathways scenarios and the Cancún pledges has been referred to as the'	Clarification
13	65	20		Replace 'these analyses exhibit substantial differences in quantitative results' with 'there are a number of delayed mitigation scenarios that delay mitigation and still meet this temperature goal and have emissions in the range of the Cancún pledges in 2020 (see Section 6.4). Analyses that have quantified the Cancún pledges exhibit substantial differences in results'	Clarification
13	65	27	28	Replace 'trajectory consistent with the 2°C target' with 'an immediate mitigation trajectory consistent with maintaining temperature change below 2°C with a 50% or greater chance'	Clarification

13	66	2	5	Figure 13.5 caption: Replace with revised text: 'Blue box plots show historic global GHG emissions and emissions in 2020 from business-as-usual projections and projections including Cancún pledges. Four cases are considered which combine assumptions about pledges (unconditional or conditional) and rules for complying with pledges (lenient or strict) . The ranges of 2020 emissions (20th percentile, median, and 80th percentile) are taken directly from the UNEP Emissions Gap Report (UNEP, 2012) and represent findings from various modelling groups considering scenarios that begin mitigation immediately. The arrows indicate the difference between the median emissions projection in each case and the median emission level projected to maintain temperature change below 2°C with a greater than 66% probability. The ranges (20th to 80th percentiles) of 2020 emissions that maintain temperature change below 2 °C can be compared to those from cost-effective immediate mitigation scenarios from the WGIII AR5 Scenario Database: greater than 66% probability: 36-47 GtCO ₂ eq/yr; 50-66% probability: 43-47 GtCO ₂ eq/yr (see Chapter 6 and Annex II.10 for details, including MAGICC calculations). Differences in these ranges depend, for example, on assumptions about the availability of negative emissions technologies (see, e.g, Figure 6.31).'	Clarification
13	66	Footnote		Removed sentence 'Figure 13.5 illustrates results from modelling of pledges by various research groups.' and merged footnote with caption of Figure 13.5	Clarification
13	131	13		Inserted reference: UNFCCC (2014). Clean Development Mechanism. United Nations Framework Convention on Climate Change, Bonn, Germany, Available at: http://cdm.unfccc.int .	Clarification
14	11	2	7	Removed descriptive text in figure caption that is now described in the figure itself	Consistency
14	11	7	8	Inserted "The red bar refers to Least Developed Countries (LDC)."	Clarification
14	13	3	7	Removed descriptive text in figure caption that is now described in the figure itself	Consistency
14	13	8	9	Inserted "The red bar refers to Least Developed Countries (LDC)."	Clarification
14	13	9		Added new explanatory sentences to figure caption: The lending interest rate refers to the average interest rate charged by banks to private sector clients for short- to medium-term financing needs. The governance index is a composite measure of governance indicators compiled from various sources, rescaled to a scale of 0 to 1, with 0 representing weakest governance and 1 representing strongest governance. Source: (UNDP, 2010; World Bank, 2011).	Clarification
14	15	11		Figure 14.3: y-axis: Included 'annual' for the label to read "Change in Annual GHG Emission from 1990-2010 [GtCO ₂ eq/yr]". Figure Legend: Replaced entry for „Total GHG Emissions“ with „Net GHG Emissions“.	Consistency
14	15	12	20	Adjusted figure caption text in line with new graphic designed figure and inserted the words "total annual" to read "... for changes in total annual GHG emissions..." and "net" to read "...indicate net changes of GHG emissions..."	Consistency
14	16	5		Figure 14.4 top panel: Adjusted y-axis label to read: "GHG Emissions per Capita [(tCO ₂ eq/cap)/yr]" and x-axis label to read: "Cumulative Population [Million]".	Consistency
14	16	6		Figure 14.4 bottom panel: Adjusted y-axis label to read: "GHG Emissions per GDP (PPP) [(kgCO ₂ eq/Int\$2005)/yr]" and x-axis label to read: "Cumulative GDP (PPP) [Billion Int\$2005]".	Consistency
14	16	7	11	Adjusted figure caption text in line with new graphic designed figure	Consistency
14	17	1		Figure 14.5: Changed y-axis label to read: "CO ₂ Emissions [GtCO ₂ /yr]"	Consistency
14	18	2	5	Adjusted figure caption text in line with new graphic designed figure	Consistency
14	18	2		Figure 14.6 left/top panel: Adjusted y-axis label to read "GHG Emissions per Capita [tCO ₂ eq/cap]" and x-axis label to read "GDP (PPP) per Capita [Int\$2005/cap]".	Consistency
14	18	2		Figure 14.6 right/bottom panel: Adjusted y-axis label to read "GHG Emissions per GDP (PPP) [(kgCO ₂ eq/Int\$2005)/yr]" and x-axis label to read "GDP (PPP) per Capita [(Int\$2005/cap)/yr]".	Consistency
14	18	6	10	Updated references and adjusted numbers of people lacking access to electricity accordingly.	Consistency
14	24	12	15	Number of GtC corrected to read 1.1 instead of 1.5	Error Correction
14	29	14		Figure 14.11: Adjusted 1st y-axis to read "Share of Household Expenditure in 2001 [%/yr]" and 2nd y-axis to read "GDP (MER) per Capita in 2001 [(1000 USD2005/cap)/yr]".	Consistency
14	29	28		Adjusted footnote in line with naming scheme of RC5 and RC10 regions and included reference to Annex II.2.	Consistency
14	30	29		Wrong references, replace ((Taylor et al., 2009; Hurtt et al., 2011; Lawrence et al., 2012)) by Meinshausen et al (2011)	Error Correction

14	31	1		Converted units in figure from GtC to GtCO ₂ in order to be consistent across report	Consistency
14	33	10		Figure 14.13: Changed legend entry to "Tonnes of CO ₂ ", i.e. 'Million' is removed as this unit is provided next to the differently sized circles.	Consistency
14	35	18		Figure 14.15: Adjusted y-axis label to read "Share of Expected Certified Emissions Reductions [%/yr]".	Consistency
14	39	41		Re-insertion of missing paragraph: As a result, prices fell by two thirds but did not reach zero because allowances could be banked beyond 2012, and the Commission acted swiftly to set a stringent centralized emissions cap for the period 2013-2020 (see Skjærseth, 2010, and Skjærseth and Wettestad, 2010, for the details of the new rules and how interest groups and member states negotiated them). This stabilized prices until late 2011. But again, the unexpected persistence of industrial production decreases led to a situation of general over-allocation and pressure on allowance prices. The European Parliament and member states decided in late 2013 to stop auctioning allowances between 2013 and 2015 to temporarily take up to 900 million allowances out of the market ("backloading").	Error Correction
14	43	8	10	Delete sentences "Some studies indeed find that pricing carbon would decrease oil wealth (Haurie and Vielle, 2011). These findings are consistent with the literature which 9 was reviewed in AR4." Footnote 3 is moved to the end of the preceding sentence in line 8.	Consistency
14	43	13	14	Delete "Several studies suggest that ..."	Consistency
14	52	38		Inserted monetary figures deflated for the year 2010	Consistency
14	52	43		Inserted monetary figures deflated for the year 2010	Consistency
15	5	4	4	Replace 'reference' with 'baseline'	Consistency
15	5	7	7	Replace 'transformation' with 'mitigation'	Consistency
15	5	13	14	Sentence amended to read "The design of institutions affects the choice and feasibility of policy options as well as the sustainable financing of climate change mitigation measures "	Consistency
15	5	14	18	Sentence amended to read "By shaping appropriate incentives, creating space for new stakeholders in decision making, and by transforming the understanding of policy choices, institutions designed to encourage participation by representatives of new industries and technologies can facilitate transitions to low-emission pathways, ..."	Consistency
15	5	20	24	Sentences reworded to read "There has been a considerable increase in national and sub-national mitigation plans and strategies since AR4 (medium evidence, high agreement). These plans and strategies are in their early stages of development and implementation in many countries, making it difficult to assess whether and how they will result in appropriate institutional and policy change, and thus, their impact on future emissions"	Consistency
15	5	24	24	Text inserted: 'to date these policies, taken together, have not yet achieved a substantial deviation in emissions from the past trend. '	Consistency
15	5	24	24	could' replaced with 'might'	Consistency
15	5	27	27	Text inserted: 'market-based'	Consistency
15	5	29	29	constraints' replaced with 'considerations'	Consistency
15	5	29	30	Second half of sentence amended to read "...economy-wide market-based policies for the singular objective of mitigation would generally be more cost-effective than sector-specific policies, political economy considerations often make economy-wide policies harder to design and implement than sector-specific policies."	Consistency
15	5	37	37	Word 'direct' inserted at beginning of sentence.	Consistency
15	5	39	40	Sentence reworded to read "Examples of regulatory approaches include energy efficiency standards; examples of information programmes include labelling programmes that can help consumers make better-informed decisions"	Consistency
15	5	47	47	Add 'change' after 'climate'	Consistency
15	6	27	28	Sentence amended to read "Adding a mitigation policy to another may not necessarily enhance mitigation "	Consistency
15	6	28	28	Text inserted 'For instance'	Consistency
15	6	31	31	irrelevant' replaced with 'ineffective'	Consistency
15	6	33	33	Text inserted "A carbon tax, on the other hand, can have an additive environmental effect to policies such as subsidies to renewables. "	Consistency
15	6	34	34	in GHG mitigation' deleted.	Consistency
15	7	1	1	Replace 'GHG' with 'climate change'	Consistency
15	7	11	11	carbon' replaced with 'GHG'	Consistency
15	7	14	15	deleted 'where projects must be built at very large scale if they are to be built at all'	Consistency
15	7	18	18	Text inserted 'on mitigation'	Consistency
15	7	35	35	Delete 'change'	Consistency
15	7	39	39	Delete 'climate'	Consistency
15	8	10	10	Replace 'reference' with 'baseline'	Consistency
15	8	12	12	Replace 'transformation' with 'mitigation'	Consistency
15	9	20	20	Add 'change' between 'climate' and 'mitigation'	Consistency
15	9	25	25	Replace Chapter '6' with '5'	Error Correction
15	9	29	29	6 replaced with 5	Error Correction
15	9	47	47	Annex II.10 replaced with Annex II.2	Error Correction
15	10	28	28	Add '(see Section 15.7)' at the end.	Consistency

15	10	Figure 15.1	Figure 15.1	Legend amended. 'None of the Above' replaced with 'No Climate Legislation or Strategy/Coordinating Body'	Error Correction
15	11	15	15	Add 'change' between 'climate' and 'mitigation'	Consistency
15	12	1	1	Replace 'Table '15.1' with '6.7'.	Consistency
15	12	2	2	Add 'and adverse side-effects' after 'co-benefits'	Consistency
15	12	2	2	Delete 'ranging from'	Consistency
15	12	5	10	Delete 'climate' (three times)	Consistency
15	12	28	28	Add 'Table 15.1 provides' at the beginning of the sentence.	Clarification
15	12	28	32	Move paragraph at the end of the first paragraph on the same page.	Consistency
15	13	2	2	and concerns' removed.	Consistency
15	13	3	3	Replace 'effects' with 'objectives and concerns'	Consistency
15	13	3	3	Replace 'relevant for' with 'assessed in'	Consistency
15	13	4	4	Added top row to table reading 'Effect of mitigation measures on additional objectives or concerns'	Consistency
15	13	5	5	Delete 'Quality of life/noise/working conditions (7.9,8.7,9.7,10.8,11.13.6)'	Error Correction
15	13	5	5	Add 'and noise' behind 'air quality' in the social column	Error Correction
15	13	5	5	Replace 'availability' with 'use' in environmental column	Error Correction
15	15	22	31	Deleted as paragraph repeated text on page 11, lines 33 to 43	Error Correction
15	15	32	32	other' replaced with 'some'	Error Correction
15	16	24	24	Delete 'change'	Consistency
15	17	5	5	Heading replaced to read 'Summary of Institutions and Governance'	Clarification
15	17	14	14	Add 'change' between 'climate' and 'mitigation'	Consistency
15	17	29	29	Delete 'change'	Consistency
15	17	44	44	Delete 'climate change'	Consistency
15	18	15	15	Replace heading with 'Regulatory Approaches' consistent with 15.5.4 heading	Consistency
15	18	20	20	Delete 'change'	Consistency
15	18	37	37	Delete 'climate'	Consistency
15	19	43	43	frequently impossible' replaced by 'very challenging'	Clarification
15	20	17	17	Heading replaced to read 'Overview of policy implementation'	Clarification
15	22	Column AFOLU	Column AFOLU	CDM expanded to read 'the Kyoto Protocol's Clean Development Mechanism'	Clarification
15	24	Table 15.2		Row 'Government Provision of Public Goods and Services' for the AFOLU column was amended to shift 'Investment in improvement and' down to the subsequent bullet to read 'Investment in improvement and diffusion of innovative technologies in agriculture and forestry'.	Error Correction
15	25	38	38	deleted 'partly'	Error Correction
15	26	10	10	This is' amended to read 'Fuel taxes are important for climate change mitigation'	Clarification
15	26	22	27	Dollar values updated to 2010 USD	Consistency
15	27	28	28	Text inserted "(Stern, 2007) shows that in Europe, where fuel taxes have been the highest, they have contributed to reductions in CO2 emissions from transport by 50% for this group of countries."	Consistency
15	28	1	1	Units in figure amended from USD2005 to USD2010, and ppp deleted from x-axis.	Error Correction
15	28	16	18	Dollar values updated to 2010 USD	Consistency
15	28	21	21	by 2050' inserted into sentence.	Clarification
15	28	24	24	Dollar values updated to 2010 USD	Consistency
15	28	26	26	by 2050' inserted into sentence.	Clarification
15	28	28	28	this' replaced with 'the potential impact of a reduction in subsidies to fossil fuels'	Clarification
15	28	Figure 15.2	Figure 15.2	Figure amended to present all numbers in 2010 USD	Consistency
15	29	18	18	inserted 'regressivity'	Clarification
15	30	21	23	Dollar values updated to 2010 USD	Consistency
15	31	30	30	Heading replaced to read 'Overview of emissions trading schemes'	Clarification
15	34	7	8	Second half of sentence amended to read "...and will cover the waste sector in May 2014. The agricultural sector must report emissions since January 2012 but a decision on when it will face surrender obligations has not yet been made."	Error Correction
15	35	17	18	Sentence amended to read: "Permits have been allocated either by auction, or have been given away for free. In the latter case, allocation has been proportional to past emissions or output (i.e., grandfathered) or proportional to current output. "	Clarification
15	36	5	5	last year's' replaced with 'the announcement in 2013'	Clarification
15	36	31	31	Replace 'tradable permits' with 'emissions trading' to be consistent with 15.5.3 heading	Consistency
15	38	25	25	Delete 'climate'	Consistency
15	38	30	30	Heading replaced to read 'Overview of the implementation of regulatory approaches'	Clarification
15	40	12	13	Text inserted "(Allcott, 2011) exhibits this case in a recent survey of US car buyers, 40% of whom were shown not to consider fuel costs in their purchasing decision"	Clarification
15	41	30	30	Add 'and procurement' to be consistent with 15.3.4 heading	Consistency
15	41	42	42	Add 'change' between 'climate' and 'mitigation'	Consistency
15	41	43	43	Delete 'climate'	Consistency
15	42	7	7	Replace 'GHG' with 'climate change'	Consistency
15	42	17	17	Delete 'GHG'	Consistency
15	42	29	29	Add 'change' between 'climate' and 'mitigation'	Consistency
15	43	11	11	Heading' Introduction' deleted.	Error Correction

15	44	28	28	Chinese provision of Taiwan' amended to read 'Taiwan, province of China.'	Error Correction
15	45	5	5	Chinese provision of Taiwan' amended to read 'Taiwan, province of China.'	Error Correction
15	46	41	41	Add 'change' between 'climate' and 'mitigation'	Consistency
15	46	44	44	Delete 'carbon'	Consistency
15	46	46	46	Add 'change' between 'climate' and 'mitigation'	Consistency
15	46	48	48	Replace '1.4' with 'an estimated 1.3' and 'lack access to clean fuel for' with 'rely on highly polluting and unhealthy traditional solid fuel for household'	Error Correction
15	47	1	1	Replace 'IEA/OECD, 2013' with 'IEA, 2012' and add '(see Section 14.3.2.1)	Error Correction
15	47	15	15	Heading replaced to read "Overview of the role of technology policy and R&D policy"	Clarification
15	47	19	19	Replace 'GHG' with 'climate change'	Consistency
15	48	9	9	Add 'change' between 'climate' and 'mitigation'	Consistency
15	48	41	41	Delete 'GHG'	Consistency
15	51	28	28	Replace 'sequestration' by 'dioxide storage'	Consistency
15	53	1	1	Heading replaced to read 'Summary of technology policy and R&D policy'	Clarification
15	53	2	2	Replace 'GHG' with 'climate change'	Consistency
15	53	12	12	Replace 'GHG reducing' with 'mitigation'	Consistency
15	53	13	13	Replace 'GHG' with 'climate change'	Consistency
15	53	27	27	Heading 'Introduction' deleted.	Error Correction
15	54	10	10	Replace 'mitigation' with 'transformation'	Consistency
15	54	13	13	Add 'reductions in' before 'health'	Consistency
15	54	41	41	Footnote moved into text behind line 22.	Consistency
15	56	5	5	Delete 'change'	Consistency
15	58	23	23	Heading replaced to read 'Overview of linkages across jurisdictions'	Clarification
15	58	25	25	Delete 'change'	Consistency
15	59	6	7	Replace 'a 'horizontal' movement of economic activities to other jurisdictions without mandatory' with '(see the glossary in Annex I for a definition)'	Error Correction
15	59	27	27	Delete 'change'	Consistency
15	60	22	22	Heading 'Introduction' deleted.	Error Correction
15	60	24	24	Delete 'climate'	Consistency
15	61	14	14	Heading replaced to read 'Summary of the role of stakeholders'	Clarification
15	62	23	25	Delete 'change' (twice)	Consistency
15	66	17	17	Delete 'climate'	Consistency
15	67	46	47	Sentence amended to read: "It is difficult to gauge the contribution of fuel taxes to mitigation efforts"	Clarification
16	3	34	35	add "with global total annual investment in the energy sector at about USD 1200 billion."	Clarification
16	7	23	25	Substitute "Under the UNFCCC, climate finance is funding provided to developing countries by Annex II Parties for climate related activities." by "Under the United Nations Framework Convention on Climate Change (UNFCCC), climate finance is not well-defined. Annex II Parties provide and mobilize funding for climate related activities in developing countries."	Clarification
16	10	9	9	Change "all" into "the majority".	Error Correction
16	13	35	35	Add ", 9% for multiple objectives and for 2% of the funding the purpose is unknown. "	Clarification
16	14	15	15	Add "global total annual investment at about USD 1200 billion and" behind "energy sector with".	Clarification
16	14	Figure 16.2		Figure up-dated.	Error Correction
16	15	33	33	Add "billion".	Clarification
16	17	4	4	Delete 'GHG' and 'approx'.	Consistency
16	17	19	20	Delete "IEA (2011), McKinsey (2009) and UNFCCC (2008) provide data only for 2010-2029."	Consistency
16	17	Figure 16.3		Swap number of studies for World/non-OECD.	Error Correction
16	17	Figure 16.3		Change group heading from „Power Plants“ to „Electricity Generation“.	Clarification
16	18	4	4	Delete 'GHG' and 'approx'.	Consistency
16	18	10	13	Delete "IEA (2011): 450 Scenario (450) relative to the Constant Policies Scenario (CPS). CPS Investment in CCS is also included under Coal & Gas (retrofitting); World investment in biofuels includes international bunkers; investment in solar PV in buildings is attributed to power plants in supply-side investment."	Consistency
16	18	18	20	Delete "McKinsey (2009), data obtained from Climate Desk, S2015 scenario with full technological potential, 100% success rate, negative lever of costs, beginning of policy in 2015. IEA (2011), McKinsey (2009) and UNFCCC (2008) provide data only for 2010-2029."	Consistency
16	18	Figure 16.4		Change group heading from „Power Plants“ to „Electricity Generation“.	Clarification
16	21	28	28	changed wording to "decreasing".	Clarification
16	22	1	1	changed wording to "shrinking".	Clarification
16	29	11	12	Change from "but is difficult to establish it up front and to adapt it as the market evolves and technologies mature" into "but it is difficult to establish the appropriate level up front and to adapt it as the market evolves and the technology matures."	Clarification
16	31	46	46	Deleted "development".	Error Correction
16	38	8	8	Delete "they" and include "private actors" instead.	Clarification

16	44	10	11	Substitute "Under the UNFCCC, climate finance is funding provided to developing countries by Annex II Parties for climate related activities." by "Under the United Nations Framework Convention on Climate Change (UNFCCC), climate finance is not well-defined. Annex II Parties provide and mobilize funding for climate related activities in developing countries."	Clarification
AI	2	1	41	A list of acronyms and chemical symbols was added to the Annex I, the title was changed accordingly and a sentence was added to the first paragraph, reading: "The glossary is followed by a list of acronyms and chemical symbols. Please refer to Annex II for standard units, prefixes, and unit conversion (Section A.II.1) and for regions and country groupings (Section A.II.2)."	Clarification
AI	2	4	4	The color of those terms that are defined in the glossary was changed from red to blue.	Clarification
AI	2	15	17	Following the WGII Approval Plenary, the second and third sentence were changed to "In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects."	Consistency
AI	3	37	37	Added 'FOLU (Forestry and Other Land Use) – also referred to as LULUCF (Land use, land-use change, and forestry) – is the subset of AFOLU emissions and removals of greenhouse gases (GHGs) resulting from direct human-induced land use, land-use change and forestry activities excluding agricultural emissions.' in response to government comments.	Clarification
AI	6	37	38	In response to a plenary decision, the definition of 'biomass' was expanded to more explicitly define 'traditional biomass' and 'modern biomass'. It now reads: "Traditional biomass Traditional biomass refers to the biomass – fuelwood, charcoal, agricultural residues, and animal dung – used with the so-called traditional technologies such as open fires for cooking, rustic kilns and ovens for small industries. Widely used in developing countries, where about 2.6 billion people cook with open wood fires, and hundreds of thousands small-industries. The use of these rustic technologies leads to high pollution levels and, in specific circumstances, to forest degradation and deforestation. There are many successful initiatives around the world to make traditional biomass burned more efficiently and cleanly using efficient cookstoves and kilns. This last use of traditional biomass is sustainable and provides large health and economic benefits to local populations in developing countries, particularly in rural and peri-urban areas. Modern biomass All biomass used in high efficiency conversion systems."	Clarification
AI	7	16	20	Added "(also referred to as Effort sharing)" to the term 'Burden sharing'	Clarification
AI	7	19	20	Deleted 'Burden sharing includes reducing the sources and enhancing the sinks of GHGs' due to redundancy	Clarification
AI	7	24	24	Replaced 'COP17/CMP6' with 'the 16th Session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change'	Consistency
AI	7	30	30	In response to a plenary decision, a definition of Cancun Pledges was added and reads: "During 2010, many countries submitted their existing plans for controlling greenhouse gas (GHG) emissions to the Climate Change Secretariat and these proposals have now been formally acknowledged under the United Nations Framework Convention on Climate Change (UNFCCC). Developed countries presented their plans in the shape of economy-wide targets to reduce emissions, mainly up to 2020, while developing countries proposed ways to limit their growth of emissions in the shape of plans of action."	Consistency
AI	7	35	36	Replaced 'total emissions permissible' with 'limits on cumulative emissions estimated'	Clarification
AI	8	1	1	To ensure consistency with the underlying WGIII report, the WGI definition of 'carbon cycle' was slightly adapted. Consistent with the SYR glossary, 'equivalently (PgC (1015g))' was replaced with 'GtCO2 (1 GtC corresponds to 3.667 GtCO2)'	Consistency
AI	8	2	2	Changed 'sinks' to 'reservoirs' to ensure consistency with WGI.	Consistency
AI	8	10	10	Added 'See Annex II.9.1 for GWP values for other GHGs.'	Clarification
AI	8	42	43	Replaced the existing definition with 'The price for the emission of avoided or released carbon dioxide (CO2) or CO2-equivalent emissions. This may refer to the rate of a carbon tax, or the price of emission permits.' in response to government comments	Error Correction
AI	8	42	43	To clarify the new definition of 'carbon price' and in response to a plenary decision, the definition was expanded to include the sentence: "In many models that are used to assess the economic costs of mitigation, carbon prices are used as a proxy to represent the level of effort in mitigation policies."	Clarification
AI	9	31	31	Deleted 'hydrochlorofluorocarbons and'	Error Correction

AI	10	43	44	In response to a plenary decision, the 'climate finance' definition was expanded. To that end, the last sentence was changed and a number of sub-entries added to read: "The literature includes several concepts in these categories, among which the most commonly used include: 1) Incremental costs: The cost of capital of the incremental investment and the change of operating and maintenance costs for a mitigation or adaptation project in comparison to a reference project. It can be calculated as the difference of the net present values of the two projects. See also Additionality. Incremental investment: The extra capital required for the initial investment for a mitigation or adaptation project in comparison to a reference project. See also Additionality. 2) Total climate finance: All financial flows whose expected effect is to reduce net greenhouse gas (GHG) emissions and/or to enhance resilience to the impacts of climate variability and the projected climate change. This covers private and public funds, domestic and international flows, expenditures for mitigation and adaptation to current climate variability as well as future climate change.	Clarification
AI	10	43	44	continued: 3) Total climate finance flowing to developing countries: The amount of the total climate finance invested in developing countries that comes from developed countries. This covers private and public funds. 4) Private climate finance flowing to developing countries: Finance and investment by private actors in/from developed countries for mitigation and adaptation activities in developing countries. 5) Public climate finance flowing to developing countries: Finance provided by developed countries' governments and bilateral institutions as well as by multilateral institutions for mitigation and adaptation activities in developing countries. Most of the funds provided are concessional loans and grants."	Clarification
AI	12	23	30	In accordance with the SYR definition and to reflect the fact that radiative forcing calculations in the version of MAGGIC used for this report includes albedo changes (subsequently translated into CO ₂ -equivalent concentration for Tables 6.2 and 6.3), 'and aerosols' was replaced by ', aerosols, and surface albedo changes'. Similarly, 'GHGs' was replaced by 'forcing components'.	Clarification
AI	12	31	38	Behind 'Annex II.9.1', 'and WGI AR5 Table 8.A.1' was added since the most up-to-date GWP values can be found in the WGI contribution to the AR5.	Clarification
AI	12	35	35	Added '(see Annex II.9.1 for GWP values of the different GHGs)'	Clarification
AI	12	43	43	Replaced 'also called' with 'often referred to as'	Clarification
AI	13	16	16	The reference to WGI Table 1.1 was changed to read '1.2'.	Consistency
AI	14	6	7	Following a plenary decision, the definition of 'cost effectiveness' was expanded for clarification to read: 'Integrated models approximate cost-effective solutions, unless they are specifically constrained to behave otherwise. Cost-effective mitigation scenarios are those based on a stylized implementation approach in which a single price on carbon dioxide (CO ₂) and other greenhouse gases (GHGs) is applied across the globe in every sector of every country and that rises over time in a way that achieves lowest global discounted costs.' In addition, the first sentence was made more general to be consistent with the SYR glossary and now reads: "A policy is more cost-effective if it achieves a goal, such as a given pollution abatement level, at lower cost".	Consistency
AI	14	39	39	Added 'analysis'	Clarification
AI	15	31	31	Replaced 'limit or reduce greenhouse gas (GHG) emissions' with 'contribute to mitigation'	Consistency
AI	16	7	8	The following cross-reference was added to the entry: "See Annex II.2.1"	Consistency
AI	16	15	15	Replaced 'show' with 'are influenced by' in line with other Working Groups	Consistency
AI	16	37	37	Expanded existing definition to avoid misunderstanding to 'Emissions that arise from the production and delivery of a product good or service or the build-up of infrastructures. infrastructure. Depending on the chosen system boundaries, upstream emissions are often included (e.g., emissions resulting from the extraction of raw materials). See also Lifecycle assessment (LCA).'	Clarification
AI	19	37	37	Added 'See also Annex II.6.2.'	Clarification
AI	20	6	6	Consistent with the AR5 Uncertainty Guidance Note, the words "quality, and consistency" were added behind "amount".	Consistency
AI	21	20	22	Deleted the definition of 'full-cost pricing' because it is not used in the report.	Consistency
AI	22	19	22	Replaced the existing sentence with 'Unless stated otherwise, this report uses GWP values calculated with a 100-year time horizon which are often derived from the IPCC Second Assessment Report (see Annex II.9.1 for the GWP values for the different GHGs).'	Clarification
AI	24	7	7	Added 'and Annex II.9.1 for GWP values'	Clarification

AI	24	18	18	In accordance with WGI and WGII glossaries, a definition of 'Industrial Revolution' was added to the glossary: "A period of rapid industrial growth with far-reaching social and economic consequences, beginning in Britain during the second half of the 18th century and spreading to Europe and later to other countries including the United States. The invention of the steam engine was an important trigger of this development. The industrial revolution marks the beginning of a strong increase in the use of fossil fuels and emission of, in particular, fossil carbon dioxide. In this report the terms pre-industrial and industrial refer, somewhat arbitrarily, to the periods before and after 1750, respectively"	Consistency
AI	25	5	10	Deleted the definition of IEA because this is publicly available information	Consistency
AI	26	20	20	Added a definition for LULUCF in response to government comments 'A greenhouse gas (GHG) inventory sector that covers emissions and removals of GHGs resulting from direct human-induced land use, land use change and forestry activities excluding agricultural emissions. See also Agriculture, Forestry and Other Land use (AFOLU).'	Clarification
AI	26	27	27	Added 'land use'	Consistency
AI	26	29	29	Added 'In the context of Carbon Dioxide Capture and Storage (CCS), 'CO2 leakage' refers to the escape of injected carbon dioxide (CO2) from the storage location and eventual release to the atmosphere. In the context of other substances, the term is used more generically, such as for 'methane (CH4) leakage' (e.g., from fossil fuel extraction activities), and 'hydrofluorocarbon (HFC) leakage' (e.g., from refrigeration and air-conditioning systems).'	Consistency
AI	27	12	12	Added 'See also Annex II.6.3.'	Clarification
AI	27	15	19	For clarification and consistency with the SPM, the likelihood qualifiers were changed to read: "virtually certain 99–100% probability, very likely 90–100%, likely 66–100%, about as likely as not 33–66%, unlikely 0–33%, very unlikely 0–10%, exceptionally unlikely 0–1%. Additional terms (more likely than not > 50–100%, and more unlikely than likely 0–< 50%) may also be used when appropriate. Assessed likelihood is typeset in italics, e. g., very likely"	Consistency
AI	27	23	24	Deleted the definition of 'marginal cost pricing' because it is not used in the report.	Consistency
AI	27	27	27	To avoid misunderstanding, 'and' was changed to 'and/or' because the listed changes do not necessarily materialize all at the same time.	Clarification
AI	27	37	37	Added 'See also Purchasing power parity (PPP) and Annex II.1.3 for the monetary conversion process applied throughout this report.'	Clarification
AI	28	9	9	Added 'See also Annex II.6.1.'	Clarification
AI	28	22	22	Added 'and Annex II.9.1 for GWP values'	Clarification
AI	30	18	18	Added 'and Annex II.9.1 for GWP values'	Clarification
AI	31	37	37	Added 'and Annex II.9.1 for GWP values'	Clarification
AI	32	27	27	In accordance with the WGI and WGII glossaries, the term 'Pre-industrial' was added, pointing to the newly inserted definition of 'Industrial Revolution'.	Consistency
AI	32	32	32	Added a definition for 'private costs' in response to government comments 'Private costs are carried by individuals, companies or other private entities that undertake an action, whereas social costs include additionally the external costs on the environment and on society as a whole. Quantitative estimates of both private and social costs may be incomplete, because of difficulties in measuring all relevant effects.'	Clarification
AI	33	4	4	Added 'See also Market exchange rate (MER) and Annex II.1.3 for the monetary conversion process applied throughout this report.'	Clarification
AI	33	10	10	In accordance with the WGI and SYR glossary entries, one sentence was added to the end of the definition: "For the purposes of this report, radiative forcing is further defined as the change relative to the year 1750 and refers to a global and annual average value."	Consistency
AI	33	17	17	Replaced 'reduced' with 'reducing'	Error Correction
AI	34	37	39	Following the WGII Approval Plenary, the definitions was slightly changed to read: "The capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation"	Consistency
AI	35	1	1	To clarify that the definition of 'risk' is to some extent report-specific, the following words were added at the beginning: 'In this report, the term risk is often used to refer to the'	Clarification
AI	35	2	2	In accordance with the WGII and SYR glossaries, 'species' was added behind 'ecosystems'.	Consistency
AI	35	8	8	In accordance with the WGII and SYR glossaries, 'implemented' was deleted.	Consistency
AI	35	26	29	Deleted the definition of 'sectoral mechanism' because it is not used in the report.	Consistency
AI	36	35	36	Replaced 'baseline mitigation trajectory over time with associated emissions' with 'emissions trajectory over time'	Clarification
AI	37	1	5	Deleted the definition of 'social unit cost of mitigation' because it is not used in the report.	Consistency
AI	37	28	28	To acknowledge that SRES scenarios were also used in WGI AR5, the following words were added: 'as well as WGI AR5' behind '(2007)'	Consistency

AI	38	35	35	Added 'and Annex II.9.1 for GWP values'	Clarification
AI	39	7	7	Replaced 'or output growth' with 'and/or economic growth'	Consistency
AI	40	9	9	"Transient climate response" was added as an entry, pointing to the existing definition of 'climate sensitivity'.	Consistency
AI	41	18	18	"Watts per square meter" was added as an entry, pointing to the existing definition of 'Radiative forcing'.	Consistency
AII	4	28	28	Row added to table for Ionizing Radiation Dose	Clarification
AII	5	0	0	Row added to table for Radiative forcing	Clarification
AII	5	0	0	(W_{th} , W_e) added to row 'power'	Clarification
AII	5	1	1	Row added to table for Passenger-Distance	Clarification
AII	5	1	1	Row added to table for Payload-Distance	Clarification
AII	5	Footnote	Footnote	Second half of first sentence amended to read 'aggregated using global warming potentials (GWPs) over a 100-year time horizon, often derived from the IPCC Second Assessment Report...'	Error Correction
AII	5	Footnote	Footnote	Text inserted 'Section 1.2.5' and '(see Annex II.9.1 for the GWP values of the different GHGs)'	Consistency
AII	7	18	18	Text inserted "In addition to these three standard aggregations some chapters feature an 11 region aggregation (GEA R11) used in the Global Energy Assessment (GEA, 2012) and other studies.'	Error Correction
AII	7	Table A.II.8		changed "OECD-1990 countries" to "OECD countries in 1990"	Clarification
AII	7	Table A.II.8		changed "Asia" to "Non-OECD Asia"	Clarification
AII	8	32	32	Text deleted 'Macao'	Error Correction
AII	9	12	12	Text deleted 'Macao'	Error Correction
AII	9	39	39	New text introduced to delineate the GEA R11 region, country lists included.	Error Correction
AII	9	42	42	Add 'change' between 'climate' and 'mitigation'	Consistency
AII	10	2	2	Delete 'climate'	Consistency
AII	10	17	17	Introduction' replaced with 'Background'	Clarification
AII	12	27	27	Introduction' replaced with 'Background'	Clarification
AII	13	16	16	Text inserted 'of LCCE'	Clarification
AII	13	23	25	Paragraph moved up to beginning of section.	Clarification
AII	14	2	2	Introduction' replaced with 'Background'	Clarification
AII	14	5	5	Replace 'mitigation' with 'reduction'	Error Correction
AII	14	19	19	Delete 'emission'	Consistency
AII	14	27	27	Text inserted 'of LCCC'	Clarification
AII	14	32	32	Delete 'assessment'	Consistency
AII	14	35	35	Replace 'about greenhouse gas emission' with 'on'	Consistency
AII	14	40	40	Delete 'GHG'	Consistency
AII	15	34	36	Delete 'climate' (twice)	Consistency
AII	15	40	40	Text added, which reads "Costs are generally measured relative to a baseline scenario without mitigation policy. Consumption losses can be expressed in terms of, inter alia, the reduction of baseline consumption in a given year or the annual average reduction of consumption growth in the baseline over a given time period."	Consistency
AII	16	9	9	for several reasons' replaced with 'because'	Error Correction
AII	17	1	1	In Figure A.II.1 'pollution' replaced with 'quality' and 'societal objectives' replaced with 'policy objectives'	Clarification
AII	19	17	17	2008' replaced by '2010'	Error Correction
AII	20	17	17	allocate' replaced with 'estimate'	Error Correction
AII	21	1	1	Figure A.II.2 data updated/corrected for column 'industry'.	Error Correction
AII	21	2	2	reallocation to' replaced with 'calculated for'	Error Correction
AII	21	3	3	Text added to caption reading "Note that industry sector CO2 emissions do not include process emissions"	Clarification
AII	21	7	7	generated' replaced with 'delivered'	Error Correction
AII	23	1	1	Text inserted 'Emission'	Clarification
AII	23	3	3	generated' replaced with 'delivered'	Error Correction
AII	23	9	9	Text inserted: "When the results of the methodology described above to estimate end-use CO2 emissions from electricity and heat production are compared with the reported IEA direct emissions from the heat and electricity sectors there is an average difference of + 1.36% over the years 1970 to 2010, indicating a slight overestimation of global CO2 emissions. This difference varies by year, with the largest negative difference in 1976 (-2.99%) and the largest positive difference in 1990 (3.23%). The cross-sectoral annual total indirect carbon emissions were then normalized to the direct emission from electricity and heat production on the global level."	Clarification
AII	23	11	11	Text inserted 'Data source: (IEA, 2012 b, c)'	Error Correction
AII	23	25	25	Delete 'climate'	Consistency
AII	24	2	11	Delete 'climate' (twice)	Consistency
AII	25	28	29	added correct references to citation following "...of long-term mitigation pathways for the iron/steel industry (Milford et al., 2013; Pauliuk et al., 2013)"	Error Correction
AII	25	47	47	Delete 'climate'	Consistency
AII	26	9	18	Delete 'climate' (twice)	Consistency
AII	27	10	10	Replace 'technologies used for GHG mitigation' with 'mitigation technologies'	Consistency
AII	27	11	11	Add 'dioxide'	Consistency
AII	28	14	16	Add 'change' between 'climate' and 'mitigation' (two times)	Consistency

AII	29	25	26	Figure caption was amended to read "...from the National Flood Insurance Program per dollar income per county per year for the years 1980 to 2008 in USD2010. Considering dollar claims per dollar income in each county corrects for increasing exposure. Note: The vertical axis gives mean excess loss, given loss at least as large as the horizontal axis."	Clarification
AII	29	26	26	Text inserted 'Source: adapted from (Kousky and Cooke, 2009)'	Error Correction
AII	30	3	4	Sentence added to caption reading "Note: The vertical axis gives mean excess loss, given loss at least as large as the horizontal axis."	Clarification
AII	30	4	4	Text inserted 'Source: adapted from (Kousky and Cooke, 2009)'	Error Correction
AII	31	23	23	Text inserted 'For the FOLU sub-sector EDGAR (JRC/PBL, 2012) represents land-based CO2 emissions from forest and peat fires and decay to approximate the CO2 flux from anthropogenic emission sources.'	Clarification
AII	31	23	23	Text inserted delineating which gases and associated GWPs are covered in the EDGAR database.	Clarification
AII	41	28	28	32' replaced with '31'	Error Correction
AII	41	31	31	three' replaced with 'four'	Error Correction
AII	42	2	4	Delete 'climate' (three times)	Consistency
AII	43	TableA.II.14	TableA.II.14	Row 'China MARKAL/TIMES' deleted	Error Correction
AII	44	TableA.II.14	TableA.II.14	Text deleted 'IIM, IIM-3.0'	Error Correction
AII	44	TableA.II.14	TableA.II.14	158 replaced by 139	Error Correction
AII	46	TableA.II.14	TableA.II.14	Row 'PECE 2' deleted.	Error Correction
AII	47	TableA.II.14	TableA.II.14	42 replaced with 41	Error Correction
AII	48	TableA.II.14	TableA.II.14	18 replaced by 16, 95 replaced by 83, 17 replaced by 16 and 378 replaced by 362	Error Correction
AII	49	TableA.II.14	TableA.II.14	4 replaced by 3, 118 replaced by 105	Error Correction
AII	50	16	16	Two column labels in Table A.II.16 were switched: "Overshoot Category" and "Negative Emissions Category"	Error Correction
AII	51	15	15	Delete 'assessment'	Consistency
AII	51	35	35	Text inserted 'In case of missing land-use related CO2 emissions the average of the RCPs was used.'	Clarification
AII	51	35	35	Text inserted 'carbonaceous aerosols and/or nitrate '	Clarification
AII	51	36	40	Text amended to read "those were added by interpolating data from RCP2.6 and RCP8.5 on the basis of the energy-related CO2 emissions of the relevant scenario vis-à-vis these RCPs. If scenarios were part of a model intercomparison project and gases, or forcers were missing, data was used from what was diagnosed as a "central" model for the same scenario (Schaeffer u. a., 2013). As a minimum requirement to derive not only Kyoto forcing, but also full anthropogenic forcing, sulfur emissions in addition to CO2, CH4, and N2O needed to be reported. Forcing from mineral dust and land use albedo was fixed at year-2000 values."	Clarification
AII	57	Table A.II.23	Table A.II.23	Deleted text '(ref & str)'	Error Correction
AII	59	1	1	Last row of the table was amended to change 114 --> 104 and 110 --> 100	Error Correction
AII	61	3	3	Text inserted 'in Sections A.II.10.1 to A.II.10.3 '	Clarification
AIII	7	Table 1 (continued)		Replaced "USD2010/tCO2" with "USD2010/tCO2eq" in 4 most right-hand columns of table below column heading LCOE.	Error Correction
AIII	9	Footnote xxviii		Replaced "USD2010/tCO2" with "USD2010/tCO2eq".	Error Correction
AIII	11ff.	III.3 Transport		Replaced "CO2" with "CO2eq" throughout text and tables in section III.3 Transport.	Error Correction
AIII	33	xiii	xiii	"This includes a switch to a zero carbon non-electric fuel, e.g., some types of biomass, or to natural gas." replaced by "This is assuming that only natural gas is used as non-electric fuel. Further reductions in non-electric fuel emission intensity are technically possible, e.g., by increased use of biomass."	Clarification
TS	3	2	2	Insert ", in the context of climate change,"	Clarification
TS	3	12	12	Replace "goal" by "objective".	Consistency
TS	3	14	16	Insert "stabilize "greenhouse gas concentrations in the atmosphere at a level to" and "sufficient".	Clarification
TS	5	31	32	Quote changed to "'dangerous interference with the climate system'".	Consistency
TS	6	19		Shift period from before to after bracket.	Consistency
TS	6	45		Shift period from before to after bracket.	Consistency
TS	8	42		Added "considering" after "involves".	Clarification
TS	8	46		Insert after "systems": "Effective risk management strategies not only consider , people's values, and their intuitive thinking decision processes but utilize formal models and decision aids for systematically addressing issues of risk and uncertainty" and delete "coupled with formal models and decision aids that foster deliberative thinking "	Clarification
TS	8	47		delete "coupled with formal models and decision aids that foster deliberative thinking".	Clarification
TS	9	1		Throughout this section some edits were undertaken for the ease of understanding: 1) improved cross-referencing within TS whenever possible as well as the referencing to the underlying chapters and sections of the full report; 2) qualified generic references to emissions wherever possible; E42	
TS	9	6	6	replace "emissions or climate impacts" by "warming"	Clarification

TS	9	45	2	Rephrase by importing sentence from SPM. By doing so add uncertainty estimates for global GHG emissions: "Total anthropogenic GHG emissions were the highest in human history from 2000 to 2010 and reached 49 (± 4.5) gigatonnes CO ₂ -equivalents per year (GtCO ₂ eq / yr) in 2010." Add footnote for transparency: "In this summary, uncertainty in historic GHG emissions data is reported using 90 % uncertainty intervals unless otherwise stated. GHG emissions levels are rounded to two significant digits throughout this document; as a consequence, small differences in sums due to rounding may occur."	Consistency
TS	10	6	9	Removed this language and included in next finding in line with SPM.	Consistency
TS	10	10	14	Imported SPM language for clarification and consistency. Made sure that all historic emission numbers are reported at two significant digits. The text with its extension reads: "CO ₂ emissions from fossil fuel combustion and industrial processes contributed about 78 % of the total GHG emission increase from 1970 to 2010, with similar percentage contribution for the period 2000 – 2010 (high confidence). Fossil fuelrelated CO ₂ emissions reached 32 (± 2.7) GtCO ₂ / yr in 2010 and grew further by about 3 % between 2010 and 2011 and by about 1 – 2 % between 2011 and 2012. Since AR4, the shares of the major groups of GHG emissions have remained stable. Of the 49 (± 4.5) GtCO ₂ eq / yr in total anthropogenic GHG emissions in 2010, CO ₂ remains the major anthropogenic GHG accounting for 76 % (38± 3.8 GtCO ₂ eq / yr) of total anthropogenic GHG emissions. 16 % (7.8± 1.6 GtCO ₂ eq / yr) come from methane (CH ₄), 6.2 % (3.1± 1.9 GtCO ₂ eq / yr) from nitrous oxide (N ₂ O), and 2.0 % (1.0± 0.2 GtCO ₂ eq / yr) from fluorinated gases (Figure TS.1)." Added an additional footnote from SPM in its corrected version: "In this report, data on non-CO ₂ GHGs, including fluorinated gases, are taken from the EDGAR database (see Annex II.9), which covers substances included in the Kyoto Protocol in its first commitment period."	Consistency
TS	10	19		Delete "of type".	Consistency
TS	10	23	29	Comprehensively revised the figure caption to make it fully self-contained.	Clarification
TS	10	27	27	Deleted "net"	Error Correction
TS	10	28	28	Replaced "whisker" by "error bars"	Clarification
TS	11	2	2	Replaced 900 by 910 for consistent reporting of historic emissions at two significant digits in this section.	Clarification
TS	11	3	3	Replaced "fossil CO ₂ emissions" by "CO ₂ emissions from fossil fuel combustion, cement production and flaring"	Error Correction
TS	11	5		Import additional footnote from SPM to define FOLU and explain relationship to AFOLU for transparency of text: "FOLU (Forestry and Other Land Use) — also referred to as LULUCF (Land Use, Land-Use Change, and Forestry) — is the subset of Agriculture, Forestry, and Other Land Use (AFOLU) emissions and removals of GHGs related to direct human-induced land use, land-use change and forestry activities excluding agricultural emissions (see WGIII AR5 Glossary)."	Clarification
TS	11	7	12	Added reference to sector and region definitions.	Clarification
TS	11	8		Insert additional sentence from SPM with some further clarification: "Since 2000, GHG emissions have been growing in all sectors, except Agriculture, Forestry and Other Land Use (AFOLU) where positive and negative emission changes are reported across different databases and uncertainties in the data are high."	Consistency
TS	11	10		Added footnote to provide information about country income groupings: "When countries are assigned to income groups in this summary, the World Bank income classification for 2013 is used. For details see Annex II.2.3."	Clarification
TS	11	15	20	Added "Of the 49 (+4.5) GtCO ₂ eq emissions in 2010" for clarification. Added absolute contributions to GHG emissions in 2010 in brackets.	Clarification
TS	11	17		Replace "6%" by "6.4%" to consistently round to two significant difits.	Clarification
TS	11	19		Delete "by 11% and 12%-points". Redundant information.	Clarification
TS	11	19		Replace 32% by 31%. This was a rounding error.	Error correction
TS	12	2	9	Revised figure caption. Replace "all sources" by "the sum of all sources". Added "(90% confidence interval)" at the end of the sentence to provide full transparency. Add reference to annex with regional definitions. Replace "whiskers" by "error bars". Refer to country income groups rather than economic regions.	Clarification
TS	13	1		Replaced two upper panels by Figure SPM.2 for greater consistency between upper and lower panel as well as TS and SPM. Revised the figure caption comprehensively to reflect this change and to make it fully self-contained.	Consistency
TS	13	13	13	Add additional information for full transparency: "Emissions are converted into CO ₂ -equivalents based on Global Warming Potentials with a 100 year time horizon (GWP100) from the IPCC Second Assessment Report. Assignment of countries to income groups is based on the World Bank income classification in 2013. For details see Annex II.2.3. Sector definitions are provided in Annex II.9."	Clarification

TS	14	1	11	Improved the cross-referencing to Figures. Used more appropriate language for last sentence, which reads: "Mean per capita GHG emissions are different from median mainly in low-income countries as individual low-income countries have high per capita emissions due to large CO2 emissions from land-use change (Figure TS.4, right panel)."	Clarification
TS	14	2	3	Added "/yr" to unit description for clarification	Clarification
TS	14	3	3	Add reference to Annex with regional definitions.	Clarification
TS	14	6	7	Change order of reference to 10th and 90th percentile	Error Correction
TS	14	8	8	Replace "regional group" by country income group"	Clarification
TS	14	13	20	Comprehensively revised the figure caption to make it fully self-contained.	Clarification
TS	14	26		Replace "developing" by "middle income" to make this statement fully consistent with the presented evidence.	Clarification
TS	15	11	18	Comprehensively revised the figure caption to make it fully self-contained.	Clarification
TS	16	3	8	Remove "of important" to avoid judgemental tone. Similarly, simplify language to "However, there is no metric that is both conceptually correct and practical to implement."	Clarification
TS	16	20	21	Remove "some important" to avoid judgemental tone.	Clarification
TS	16	34		Corrected reference and replaced "6.2" by "6.3.2.5".	
TS	16	39	45	Put last paragraph into a footnote to box.	Clarification
TS	17	9	10	Made the bolded lead sentence consistent with SPM language: "Globally, economic and population growth continue to be the most important drivers of increases in CO2 emissions from fossil fuel combustion. The contribution of population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply."	Consistency
TS	17	10		Replace "decline" by "emission reductions from improvements" to make this sentence unambiguous.	Clarification
TS	17	11	15	Corrected wording to read: "Over the same period, income as measured through production and/ or consumption per capita has grown by a factor of about two. The exact measurement of global economic growth is difficult because countries use different currencies and converting individual national economic figures into global totals can be done in various ways."	Error Correction
TS	17	24	28	Corrected figure and its caption consistent with the respective error-corrected version of Figure SPM.3	Error Correction
TS	18	16	17	Extended bolded finding to make it consistent with SPM. This clarifies the language. It now reads: "Without additional efforts to reduce GHG emissions beyond those in place today, emissions growth is expected to persist, driven by growth in global population and economic activities despite improvements in energy supply and end-use technologies (high confidence)."	Consistency
TS	18	19		Clarified CO2eq concentrations in footnote consistent with approach taken in SPM (removed from para). The footnote reads: "These CO2eq concentrations represent full radiative forcing, including GHGs, halogenated gases, tropospheric ozone, aerosols, mineral dust and albedo change. "	Consistency
TS	18	19		Added temperature projections for baseline scenarios for consistency with SPM and subsequent sections in the TS at the end of sentence: "and result in projected global mean surface temperature increases in 2100 from 3.7 to 4.8 °C compared to pre-industrial levels ⁸ (range based on median climate response; the range is 2.5 °C to 7.8 °C when including climate uncertainty, see Table TS.1)". Notes that these include SPM corrections around the "median climate response". Transparency requires also the addition of two footnotes to establish the required transparency over these projections as in SPM. The first footnote explains the pre-industrial temperature reference: "Based on the longest global surface temperature dataset available, the observed change between the average of the period 1850 – 1900 and of the AR5 reference period (1986 – 2005) is 0.61 °C (5 – 95 % confidence interval: 0.55 to 0.67 °C) [WGI SPM.E], which is used here as an approximation of the change in global mean surface temperature since pre-industrial times, referred to as the period before 1750." The second footnote establishes explains the climate uncertainty range: "Provided estimates reflect the 10th to the 90th percentile of baseline scenarios collected for this assessment. The climate uncertainty reflects the 5th to 95th percentile of climate model calculations described in Table TS.1 for each scenario."	Consistency
TS	18	22	24	Corrected 2011 radiative forcing estimates in line with SPM: "For comparison, the CO2eq concentration in 2011 has been estimated to be 430 ppm (uncertainty range 340–520 ppm)." Added footnote for further clarification and transparency. It reads: "This is based on the assessment of total anthropogenic radiative forcing for 2011 relative to 1750 in WGI, i.e. 2.3 W m ⁻² , uncertainty range 1.1 to 3.3 W m ⁻² . [WGI AR5 Figure SPM.5, WGI 8.5, WGI 12.3]"	Error correction

TS	18			Throughout this section 3.1 some edits were undertaken for the ease of understanding: 1) Reference to scenario categories with short hands as highlighted in Table TS.1/SPM1: "about 450" for 430-480 category; "about 500" for 480-530 category; "about 550" for 530-580 category. 2) Corrected GHG concentrations to CO2eq concentrations, wherever erroneously included. 3) Improved cross-referencing within TS and referencing to underlying report wherever possible.	
TS	19	6	12	Revised figure caption to make it fully self-contained.	Clarification
TS	21	5	5	Correct GHG to CO2eq	Error correction
TS	21	19	19	Add reference to Box TS.7. Correct reference to section 2.6.3 (instead of 2.4.4.4) and add reference to section 3.7.2.1.	Clarification
TS	21	20		Correct "greenhouse gas concentrations" to "CO2eq concentrations".	Error Correction
TS	21	30		Added a sentence for consistency with SPM and improve cross-referencing to underlying report: "At the national level, change is considered most effective when it reflects country and local visions and approaches to achieving sustainable development according to national circumstances and priorities. [4.2, 6.3-6.8, 11.8]"	Consistency
TS	21	35	35	Change "requirements" to "outcomes"	Clarification
TS	21	35	35	Add "synergies and" before tradeoffs for consistency with the language used throughout the report	Consistency
TS	22	25		Added a sentence for clarity from SPM: "The models approximate cost-effective solutions that minimize the aggregate economic costs of achieving mitigation outcomes, unless they are specifically constrained to behave otherwise."	Clarification
TS	22	38	41	Clarified the language to make it easier digestible for readers and consistent with SPM pulling some text up from the body. More technical information on RCPs removed from heading and introduced in the body of paragraph. It reads: "Mitigation scenarios point to a range of technological and behavioral measures that could allow the world's societies to follow emissions pathways consistent with a range of different levels of mitigation (high confidence)."	Consistency
TS	22	42		Included "and 300 baseline scenarios" and removed "out of more than 1200 total scenarios" for language clarity.	Clarification
TS	22	43	47	Made language consistent with SPM inserting the more specific text deleted from the bolded headline: "The mitigation scenarios span atmospheric concentration levels in 2100 from 430 ppm CO2eq to above 720 ppm CO2eq, which is roughly comparable to the 2100 forcing levels between the RCP2.6 and RCP6.0 scenarios (Figure TS.8, left panel)."	Consistency
TS	22	47	49	Made language consistent with SPM. It reads: "Other scenarios were also assessed, including some scenarios with concentrations in 2100 below 430 ppm CO2eq (for a discussion of these scenarios see below)."	Consistency
TS	23	1	5	Figure corrected by including f-gases in the RCP lines and revised caption to make it clear and fully self-consistent. Also corrected that high overshoot scenarios "with large net negative emissions" rather than "large negative emissions" are shown.	Error correction
TS	23	3	3	add "net" before "negative emissions"	Clarification
TS	23	14	16	Replaced language with clearer language from a SPM footnote. It now reads: "Overshoot involves less mitigation in the near term, but it also involves more rapid and deeper emissions reductions in the long run."	Clarification
TS	23/24	35	3	Clarified that the climate model MAGICC was used for the calculations.	Clarification
TS	27/28			Changed the order of Figures SPM.9 and SPM.10 as the latter requires information from the former.	Clarification
TS	24	9	9	Missing word, sentence incomplete: Add "meeting" before "different targets".	Clarification
TS	24	12	26	Imported critical information from the SPM to clarify the relationship between concentration and temperature change in a balanced way. Removed additional information on 1.5°C scenarios as SPM finding has been inserted in TS later for consistency with SPM and for the ease of the reader. Removed information on how results were calculated as this is redundant with information from Box TS.8.	Clarification
TS	24	27	44	Improve the clarity of the language and consistency with SPM by importing some SPM language: (1) split the finding into two; (2) imported lead sentence for first finding from SPM; (3) made sure that remaining SPM contents are included in second finding. New text include SPM corrections that have been undertaken (see list of errata). (4) Improved cross-referencing to figures.	Consistency
TS	25	1	16	Updated Table TS.1 to be fully self-contained and match SPM; made sure that any text that has been previously corrected in SPM errata is included here as well.	Consistency
TS	25	18	32	Imported SPM language for clarification and consistency and to ensure a balanced discussion of emission reduction requirements. Inserted a sentence that clarifies the role of extreme overshoot scenarios in this emissions reductions range. Ensured full consistency with Table TS.1/SPM.1 by reviewing emission reductions and carbon budget numbers.	Consistency

TS	25	21		Inserted new footnote outlining differences in emission reduction ranges between AR4 and AR5. It reads: "This range differs from the range provided for a similar concentration category in AR4 (50 % to 85 % lower than 2000 for CO2 only). Reasons for this difference include that this report has assessed a substantially larger number of scenarios than in AR4 and looks at all GHGs. In addition, a large proportion of the new scenarios include Carbon Dioxide Removal (CDR) technologies and associated increases in concentration overshoot. Other factors include the use of 2100 concentration levels instead of stabilization levels and the shift in reference year from 2000 to 2010." Made sure that any correction that has been undertaken in SPM is carried over here.	Clarification
TS	25	33	33	Delete "at lowest global mitigation cost". As written this is ambiguous and was therefore removed from the text to make it clearer	Clarification
TS	26	5	15	Set of smaller changes to clarify text and make it consistent with SPM. For accuracy, removed "nearly" and replaced "cannot" by "could not" in the second and third sentences respectively. Inserted SPM language that clarifies the meaning of "low and zero carbon technologies". Removed "as well as higher levels" from lead sentence for accuracy.	Consistency
TS	26	11	12	Add reference to concentration range	Clarification
TS	26	25	38	Established closer consistency with SPM language for clarity. 1) Inserted "efforts beyond those in place today" in the lead sentence to clarify that there are already mitigation activities on-going. 2) Removed language explaining that scenarios with emission levels in 2030 above 55 Gt CO2eq are largely driven by delay for simplicity. 3) Corrected reference to median rather than mean emission reductions.	Consistency
TS	26	39	42	Updated lead sentence with approved language from SPM: "Estimated global GHG emissions levels in 2020 based on the Cancún Pledges are not consistent with cost-effective longterm mitigation trajectories that reach atmospheric concentrations levels of about 450 to about 500 ppm CO2eq by 2100, but they do not preclude the option to meet that goal (robust evidence, high agreement)."	Consistency
TS	26	46		Inserted a dedicated finding (including footnote) on the literature related to 1.5°C goal from the SPM. This content was scattered in the TS before and has now one dedicated place. This improves the clarity of the text: "Only a limited number of studies have explored scenarios that are more likely than not to bring temperature change back to below 1.5 °C by 2100 relative to pre-industrial levels; these scenarios bring atmospheric concentrations to below 430 ppm CO2eq by 2100 (high confidence). Assessing this goal is currently difficult because no multi-model study has explored these scenarios. The limited number of published studies exploring this goal have produced associated scenarios that are characterized by (1) immediate mitigation; (2) the rapid up-scaling of the full portfolio of mitigation technologies; and (3) development along a low-energy demand trajectory. [6.3, 7.11]". The associated footnote reads: "In these scenarios, the cumulative CO2 emissions range between 680 – 800 GtCO2 for the period 2011 – 2050 and between 90 – 310 GtCO2 for the period 2011 – 2100. Global CO2eq emissions in 2050 are between 70 – 95 % below 2010 emissions, and they are between 110 – 120 % below 2010 emissions in 2100." Note that any corrections previously made in the SPM have been carried over here.	Clarification
TS	27	1	11	Made sure that figure including its caption is self-contained and includes all required information for transparency. Comprehensive revisions. Explanations added for: a) historic GHG emissions levels and their uncertainty range (black dot with hiskers); b) historic rates of emission reductions during the last decade (2000-2010). Further, we clarified that extreme scenarios shown are the ones with "high net negative emissions" rather than high negative emissions. This is also corrected in Figure itself. Re-edited caption for better readability and changed sequencing of information in this context.	Error Correction
TS	28	1	10	Made sure that figure including its caption is self-contained and includes all required information for transparency. Adjusted figure by including extreme scenarios with large net negative emissions shown as individual points for consistency with previous figures. Corresponding explanations included in caption. Clarified the meaning of the arrows by adding explanation to caption. Clarified that scenarios with exogenous carbon price assumptions are excluded in both panels and scenarios with policies affecting the timing of mitigation other than 2030 interim targets are excluded in the right panel additionally.	Error Correction
TS	28	13	13	Added sentence: "Includes only scenarios for which temperature exceedance probabilities were calculated." to establish full transparency over scenario selection.	Clarification

TS	29	11	24	Improved clarity and transparency by inserting some information that was implicit previously. A) highlighted median estimates as in Table TS.2; B) Added information on annual average reduction of consumption growth for short-(2030), medium term (2050) and long-term. This reads: "The consumption losses correspond to an annual average reduction of consumption growth by 0.06 to 0.2 percentage points from 2010 through 2030 (median: 0.09), 0.06 to 0.17 percentage points through 2050 (median: 0.09), and 0.04 to 0.14 percentage points over the century (median: 0.06). These numbers are relative to annual average consumption growth rates in baseline scenarios between 1.9 % and 3.8 % per year through 2050 and between 1.6 % and 3 % per year over the century (Table TS.2, yellow segments)." C) Improved cross-referencing to figures and tables. D) Corrected consumption loss numbers from "2%-12%" to "3% to 11%" and edited comparison to baseline scenarios in line with SPM to read "relative to consumption in baseline scenarios (those without additional mitigation efforts) that grows anywhere from 300 % to more than 900 % between 2010 and 2100 (baseline consumption growth represents the full range of corresponding baseline scenarios; Figure TS.12; Table TS.2 yellow segments)."	Clarification
TS	29	20	20	Correct "about 450" to read "430-530"	Error correction
TS	29	22	22	Insert "and limits on technology availability"	Clarification
TS	29	23	23	Add "Both higher and lower estimates have been obtained based on"	Clarification
TS	29	23	24	Move sentence upward in paragraph to better contextualise information.	Clarification
TS	29	27	35	Revised figure caption to make sure that it is fully self-contained. Changes include: A) Replace: "in scenarios assuming immediate global action and a globally harmonized carbon price" by "idealized implementation". This is a more generic and adequate description of the scenarios covered. For further information see entries on Figure 6.21. B) Replace "Sample size" by "The number of scenarios included in the boxplots".	Clarification
TS	30	13		Inserted sentence that explains reductions in annual average consumption growth for transparency: "They can be expressed as a reduction in overall consumption relative to consumption in the corresponding baseline scenario in a given year or as a reduction of the average rate of consumption growth in the corresponding baseline scenario over a given time period."	Clarification
TS	30	29	29	Replace "6.3.6.4" by "6.3.6.5".	Error correction
TS	30	30	41	Clarified the notion of delay in mitigation by making the language consistent with SPM: "delaying mitigation efforts beyond those in place today". Clarified that we are talking about "aggregate" mitigation costs in this paragraph. Removed last sentence as it is redundant with an earlier paragraph to avoid confusion.	Consistency
TS	30	36	39	Sentence was unclear. Rephrased it for greater clarity.	Clarification
TS	30	40	40	Replace "under delayed mitigation" by "from such emission levels in 2030". This is more precise language and directly links to the respective Figures TS.9 and TS.13	Clarification
TS	30			Imported Table TS.2 from SPM to provide full transparency to reader. Added two columns of information on annual average reduction of consumption growth for short- (2030) and medium term (2050) and long-term. This is important as mitigation costs are not distributed evenly across time.	Consistency
TS	31	7	22	Comprehensively revised the figure caption in line with the underlying chapter (Figure 6.24 and 6.25). Included information on number of models that could successfully run technology variation scenario.	Consistency
TS	31	24	35	Revision of finding to improve clarity of the language and make it more compatible with SPM language. 1) Bolded lead sentence rephrased along SPM: "The distribution of mitigation costs among different countries depends in part on the nature of effort-sharing frameworks and thus need not be the same as the distribution of mitigation efforts." 2) Inserted further crucial clarification on effort-sharing: "Different effort-sharing frameworks draw upon different ethical principles." 3) Import "In cost-effective scenarios" from SPM to make context of finding clear; 4) Remove "will" to avoid perception of prescription; 5) Insert further contextual information and remove impressions of judgement: "Some studies exploring particular effort-sharing frameworks, under the assumption of a global carbon market, estimate that the associated financial flows could be in the order of hundred billions of USD per year before mid-century to bring concentrations to between about 450 and about 500 ppm CO ₂ eq in 2100."; 6) Edit last sentence for clarity to: "Actual approaches to effort-sharing can deviate from this assumption."	Consistency
TS	33	16	17	Imported language from SPM for consistency and clarity. It reads: "Mitigation scenarios reaching about 450 to about 500 ppm CO ₂ eq by 2100 show reduced costs for achieving energy security and air quality objectives (medium confidence) (Figure TS.14, lower panel)."	Consistency

TS	33	24	26	Imported language from SPM for consistency and clarity. It reads: "Mitigation scenarios reaching about 450 to about 500 ppm CO ₂ eq by 2100 show co-benefits for energy security objectives, enhancing the sufficiency of resources to meet national energy demand as well as the resilience of the energy system (medium confidence)."	Consistency
TS	33	30	38	Imported language from corresponding SPM finding. Retrieved additional information from original finding saying that "a limited number of studies find that mitigation policies could increase the relative competitiveness of conventional oil vis á vis more carbon intensive unconventional oil and coal to liquids."	Consistency
TS	35	3	5	Clarified sentence by rephrasing: "The benefits from major cuts in air pollutant emissions are particularly high where currently legislated and planned air pollution controls are weak." Add reference to Figure TS.14.	Clarification
TS	35	7	8	Deleted "and subject to scientific debate" as it does not add any value or information to sentence.	Clarification
TS	35	8		Imported additional finding from SPM to provide the broader context on the subject of co-benefits and adverse side-effects and to further enhance consistency with SPM. It reads: "There is a wide range of possible adverse side-effects as well as co-benefits and spillovers from climate policy that have not been well-quantified (high confidence). Whether or not side-effects materialize, and to what extent side-effects materialize, will be caseand site-specific, as they will depend on local circumstances and the scale, scope, and pace of implementation. Important examples include biodiversity conservation, water availability, food security, income distribution, efficiency of the taxation system, labour supply and employment, urban sprawl, and the sustainability of the growth of developing countries. (Box TS.11)"	Clarification
TS	35	9	19	Updated the finding with the language from the corresponding SPM finding. It reads now: "Some mitigation policies raise the prices for some energy services and could hamper the ability of societies to expand access to modern energy services to underserved populations (low confidence). These potential adverse side-effects can be avoided with the adoption of complementary policies (medium confidence). Most notably, about 1.3 billion people worldwide do not have access to electricity and about 3 billion are dependent on traditional solid fuels for cooking and heating with severe adverse effects on health, ecosystems and development. Providing access to modern energy services is an important sustainable development objective. The costs of achieving nearly universal access to electricity and clean fuels for cooking and heating are projected to be between 72 to 95 billion USD per year until 2030 with minimal effects on GHG emissions (limited evidence, medium agreement). A transition away from the use of traditional biomass and the more efficient combustion of solid fuels reduce air pollutant emissions, such as sulfur dioxide (SO ₂), nitrogen oxides (NO _x), carbon monoxide (CO), and black carbon (BC), and thus yield large health benefits (high confidence). [4.3, 6.6, 7.9, 9.3, 9.7, 11.13.6, 16.8]"	Consistency
TS	35	21	24	Qualify hydropower statement by adding "some forms of"	Clarification
TS	35	25	28	Revised language for clarity making sure that any impression of prescription is avoided.	Clarification
TS	37	2	11	Delete chapeau to subsection TS.3.2 or add chapeau to subsection TS.3.1.	Consistency
TS	37	13	14	Included "net" before "CO ₂ emissions" and replaced "land-use" by "AFOLU"	Consistency
TS	37	15	17	Merged sentences and replaced "As a result" with "ultimately accounting for the"; removed "as expected" at the end of the merged sentence.	Error Correction
TS	37	17	18	Included "net" before "CO ₂ emissions" and replaced "land-use" by "AFOLU"	Consistency
TS	37	18	19	Replaced "land use" with "AFOLU" and "around 2050" with "towards the end of the century"	Consistency
TS	37	19		Include addtinal references to underlying chapter sections: 6.3.1.4, 6.8	Clarification
TS	37	19		Include relevant section references in square brackets [6.3.1.4, 6.3.2.4, 6.8.2]	Consistency
TS	37	21	30	Adjusted figure caption in line with figure updates and in line with updated figure caption from Figure 6.34. H67 "Direct (left panel) and direct and indirect emissions (right panel) of CO ₂ and non-CO ₂ GHGs across sectors in baseline scenarios. Non-CO ₂ GHGs are converted to CO ₂ -equivalents based on Global Warming Potentials with a 100-year time horizon from the IPCC Second Assessment Report (SAR) (see Box TS.5). Note that in the case of indirect emissions, only electricity generation emissions are allocated from energy supply to end-use sectors. In the left panel electricity sector emissions are shown (Electricity*) in addition to energy supply sector emissions which they are part of, to illustrate their large role on the energy supply side. The numbers at the bottom refer to the number of scenarios included in the ranges that differ across sectors and time due to different sectoral resolutions and time horizons of models. [Figure 6.34]"	Consistency

TS	38	1	2	Inserted "reinforcing the importance of early action for ambitious mitigation" at the end of the sentence to emphasize the important effect of lock-in effects for mitigation.	Clarification
TS	38	4	5	Replaced "land use planning related lock-in" with "lock-in related to infrastructure and spatial planning" to correct for the unclear term "land-use"	Clarification
TS	38	8	10	Replaced "longer life-times of low emissions" with "with long lifetimes and low lifecycle emissions" to clarify that low emission products do not automatically have longer life times	Clarification
TS	38	8		Inserted term "materials" to clarify that low emission materials are important for producing low emission products and infrastructures	Clarification
TS	38	10		Inserted small explanation in brackets to clarify what dematerialization means: (i.e. through reducing the total material inputs required to deliver a final service)	Clarification
TS	38	10		Inserted additional references to underlying chapter sections: 6.3.6.4, 10.4	Consistency
TS	38	11		Changed cost-efficient to cost-effective to remain internally consistent across report	Consistency
TS	38	25		Replaced "fuel" by "energy carrier" as electricity is not considered a fuel	Clarification
TS	38	32		Included "due to, e.g., efficiency enhancement and behavioural change, " to emphasize the different components of energy demand reductions	Clarification
TS	38	36		Delete comma before "of"	Error Correction
TS	38	37	38	Replaced "number" with "potential" before "co-benefits" and "adverse side effects" to emphasize that co-benefits and adverse side effects are not necessary consequences. The corrected sentence reads: "... since the potential for co-benefits of energy end-use measures outweighs the potential for adverse side-effects..."	Clarification
TS	38	38		Replaced "is" by "may be"	Consistency
TS	39	2	10	Caption Figure TS.16: made reference to categories of mitigation scenarios consistent. New text reads: "Influence of energy demand on the deployment of energy supply technologies in 2050 in mitigation scenarios reaching about 450 to about 500 (430 – 530) ppm CO ₂ eq concentrations by 2100." Replaced sentence with more detailed version from underlying chapter. The new sentence reads: "Scenarios assuming technology restrictions and scenarios with final energy in the base-year outside ± 5 % of 2010 inventories are excluded."	Consistency
TS	39	12		Replaced "and can have" with "with" and inserted "in some sectors, in particular when"	Consistency
TS	39	13		Replaced "limited" by "medium"	Consistency
TS	39	14		Inserted "and mode" as modal changes are an important behaviour related mitigation option in the transport sector	Clarification
TS	39	21	23	Rewrote sentence to be clearer: In most long-term mitigation scenarios not exceeding 580ppm CO ₂ eq by 2100, global energy supply is fully decarbonized at the end of the twenty-first century with many scenarios relying on a net removal of CO ₂ from the atmosphere	Clarification
TS	39	27		Inserted "generation" to read "electricity generation emissions"	Clarification
TS	40	1	2	Reformulated sentence to be correct: The availability of carbon dioxide removal technologies affects the size of the mitigation challenge for the energy supply, energy end-use and AFOLU sectors.	Error Correction
TS	40	3		Inserted "in mitigation scenarios"	Clarification
TS	40	8		Replaced 'energy generation' by 'biomass supply for energy,'	Clarification
TS	40	12		Replaced figure with updated version	Consistency
TS	40	13	21	Figure TS.17: Adjusted figure caption in line with figure updates and in line with updated figure caption from Figure 6.35. The new caption title reads: "Direct emissions of CO ₂ and non-CO ₂ GHGs across sectors in mitigation scenarios that reach about 450 (430–480) ppm CO ₂ eq concentrations in 2100 with using carbon dioxide capture and storage (CCS) (left panel) and without using CCS (right panel). The numbers at the bottom of the graphs refer to the number of scenarios included in the ranges that differ across sectors and time due to different sectoral resolutions and time horizons of models. White dots in the right panel refer to emissions of individual scenarios to give a sense of the spread within the ranges shown due to the small number of scenarios. [Figures 6.35]"	Consistency
TS	43	3	5	Inserted "Annual" before "GHG emissions from...." and "global" before "energy" and "supply" before "sector; corrected years to display the full decade. The corrected sentence reads: "Annual GHG emissions from the global energy supply sector grew more rapidly between 2000 and 2010 than in the previous decade; their growth accelerated from 1.7 % / yr from 1990 – 2000 to 3.1 % / yr from 2000 – 2010."	Clarification
TS	43	10		Inserted "In the baseline scenarios assessed in AR5, "	Clarification
TS	43	14		Inserted "The availability of fossil fuels alone will not be sufficient to limit CO ₂ eq concentration to levels such as 450 ppm, 550 ppm, or 650 ppm."	Consistency
TS	43	15	17	Deleted "While direct GHG emissions from energy end-use sectors tend to stabilize in the second half of this century in baseline scenarios, the growth of the direct emissions from the energy supply sector is projected to continue in the long-term."	Consistency

TS	43	17		Inserted additional references to underlying chapter sections: 6.3.4, Figure 6.15]	Clarification
TS	43	31	32	Replaced "In integrated modelling studies, decarbonizing electricity generation is a key component of cost-effective mitigation strategies" with "Decarbonizing (i.e. reducing the carbon intensity of) electricity generation is a key component of cost-effective mitigation strategies in achieving low-stabilization levels (430–530 ppm CO ₂ eq)"; inserted "integrated modelling" before scenarios; inserted "in electricity generation" in context of decarbonization.	Consistency
TS	43	34	36	Deleted "In general, the rapid decarbonization of electricity generation is realized by a rapid reduction of conventional coal power generation associated with a limited expansion of natural gas without CCS over the near term [6.8, 7.11]"	Consistency
TS	43	36	38	Rephrased sentence for consistency regarding reference to mitigation scenarios and added clarification on the sources of low-carbon energy. The updated sentence reads: "In the majority of mitigation scenarios reaching about 450 ppm CO ₂ eq concentrations by 2100, the share of low-carbon electricity supply (comprising RE, nuclear, fossil fuels with CCS, and BECCS) increases from the current share of around 30 % to more than 80 % by 2050, and fossil fuel power generation without CCS is phased out almost entirely by 2100."	Clarification
TS	43	37		Inserted "(comprising renewable energy (RE), nuclear and CCS)" after "low carbon electricity supply"	Clarification
TS	43	39		Inserted additional references to underlying chapter sections: [7.14, Figure SPM.7].	Clarification
TS	43	40	42	Adjusted bold key finding according to approved SPM text: "Since AR4, many RE technologies have demonstrated substantial performance improvements and cost reductions, and a growing number of RE technologies have achieved a level of maturity to enable deployment at significant scale".	Consistency
TS	43	45		Inserted "Regarding electricity generation alone," before "RE accounted for..."	Consistency
TS	44	3		Inserted "significantly" before "increased"; inserted "RE technology policies have been successful in driving the recent growth of RE."	Consistency
TS	44	6		Replaced figure with updated version from Chapter	Consistency
TS	44	7		Inserted 'fuel' to read 'liquid fuel supply sectors'	Clarification
TS	44	9		Included "and bioenergy with CCS" to clarify that CCS does not only relate to fossil fuels	Clarification
TS	44	22	23	Adjusted bold key finding according to approved SPM text: "Nuclear energy is a mature low GHG emission source of baseload power, but its share of global electricity generation has been declining (since 1993). Nuclear energy could make an increasing contribution to low-carbon energy supply, but a variety of barriers and risks exist."	Consistency
TS	44	26		Inserted additional reference to underlying chapter section: 7.12	Consistency
TS	44	27	29	Adjusted bold key finding according to approved SPM text: "Barriers and risks associated with an increasing use of nuclear energy include operational risks and the associated safety concerns, uranium mining risks, financial and regulatory risks, unresolved waste management issues, nuclear weapon proliferation concerns, and adverse public opinion."	Consistency
TS	44	30	31	Altered language to clarify what concentration range is meant when talking about stringent mitigation scenarios: "Investigation of stringent mitigation scenarios not exceeding 580 (450ppm, 550ppm CO ₂ -eq)...."	Clarification
TS	44	30		Inserted "and progress has been made concerning safety and waste disposal."	Consistency
TS	44	33	34	Deleted 'also' as the scenario literature does not provide results for experiments where both technological options, i.e. nuclear and CCS, have been constrained. The corrected sentence reads: "If other technologies, such as CCS, are constrained the role of nuclear power expands."	Error Correction
TS	45	1		Replaced figure with updated version where CO ₂ had been corrected to CO ₂ eq.	Consistency
TS	45	2		Replaced figure caption of Figure TS.19 with a more succinct description and corrected unit by inserting "eq" after "CO ₂ " to read "gCO ₂ eq/ kilowatt hour (kWh)" and deleted "(and gCO ₂ eq / kWh, respectively)"	Clarification
TS	45	6		Inserted "about 450 to about 500" and "CO ₂ eq". The corrected sentence reads: "... for the set of about 450 to about 500 (430-530) ppm CO ₂ eq scenarios...."	Consistency
TS	46	10	13	Adjusted bold key finding according to approved SPM text: "GHG emissions from energy supply can be reduced significantly by replacing current world average coal-fired power plants with modern, highly efficient natural gas combined cycle power plants or combined heat and power (CHP) plants, provided that natural gas is available and the fugitive emissions associated with its extraction and supply are low or mitigated"	Consistency

TS	46	13	15	Adjusted sentence according to approved SPM text: "In mitigation scenarios reaching about 450 ppm CO ₂ e concentrations by 2100, natural gas power generation without CCS typically acts as a bridge technology, with deployment increasing before peaking and falling to below current levels by 2050 and declining further in the second half of the century..."	Consistency
TS	46	18	23	Replaced two sentences according to approved SPM text: "While all components of integrated CCS systems exist and are in use today by the fossil fuel extraction and refining industry, CCS has not yet been applied at scale to a large, commercial fossil-fuel power plant. CCS power plants could be seen in the market if they are required for fossil fuel facilities by regulation or if they become competitive with their unabated counterparts, for instance, if the additional investment and operational costs faced by CCS plants, caused in part by efficiency reductions, are compensated by sufficiently high carbon prices (or direct financial support)."	Consistency
TS	46	32		Inserted missing uncertainty qualifier "(limited evidence, medium agreement)"	Consistency
TS	46	33	34	Adjusted bold key finding according to approved SPM text: "Combining bioenergy with CCS (BECCS) offers the prospect of energy supply with large-scale net negative emissions, which plays an important role in many low-stabilization scenarios, while it entails challenges and risks."	Consistency
TS	46	36	38	Adjusted sentence according to approved SPM text: "Technological challenges and risks include those associated with the upstream provision of the biomass that is used in the CCS facility, as well as those associated with the CCS technology itself."	Consistency
TS	47	3		Inserted sentence from table into caption: "For possible upstream effects of biomass supply for bioenergy, see Table TS.8."	Clarification
TS	48	2		Inserted 'global' to read: "...emissions in the global transport sector..."	Clarification
TS	48	6	8	Inserted "The global transport sector accounted for 27% of final energy use " and restructured remaining sentence accordingly.	Consistency
TS	48	14		Replaced "higher energy demand reduction potential in the transport sector than in the AR4" with "a higher mitigation reduction potential in the transport sector than reported in the AR4"	Clarification
TS	48	19		Included 'relative to baselines'	Clarification
TS	48	22	27	Included new caption text to be more consistent with newly designed figure: Final energy demand reduction relative to baseline (left panel) and development of final low carbon energy carrier share in final energy (including electricity, hydrogen, and liquid biofuels; right panel) in transport by 2030 and 2050 in mitigation scenarios from three different CO ₂ e concentrations ranges shown in box plots (see Section 6.3.2) compared to sectoral studies shown in shapes assessed in Chapter 8. Filled circles correspond to sectoral studies with full sectoral coverage. [Figures 6.37 and 6.38]	Consistency
TS	49	13	15	Replaced bold sentence with the following updated wording according to SPM changes: "Strategies to reduce the carbon intensities of fuel and the rate of reducing carbon intensity are constrained by challenges associated with energy storage and the relatively low energy density of low-carbon transport fuels; integrated and sectoral studies broadly agree that opportunities for fuel switching exist in the short term and will grow over time."	Consistency
TS	49	17	20	Deleted "In particular, the mitigation potential of biofuels (particularly advanced "drop-in" fuels for aircraft and other vehicles) will depend on technology advances and sustainable feedstocks (medium evidence, medium agreement)." and inserted the following sentences "Methane-based fuels are already increasing their share for road vehicles and waterborne craft. Electricity produced from low-carbon sources has near-term potential for electric rail and short- to medium-term potential as electric buses, light-duty and 2-wheel road vehicles are deployed. Hydrogen fuels from low-carbon sources constitute longer-term options. Commercially available liquid and gaseous biofuels already provide co-benefits together with mitigation options that can be increased by technology advances, particularly drop-in biofuels for aircraft. Reducing transport emissions of particulate matter (including black carbon), tropospheric ozone and aerosol precursors (including NO _x) can have human health and mitigation co-benefits in the short term (medium evidence, medium agreement)."	Consistency
TS	49	21	23	Replaced 'include' by 'show' and inserted missing references to underlying sections. The updated sentence reads: During the second half of the century, many integrated studies also show substantial shares of electricity and / or hydrogen to fuel electric and fuel-cell light-duty vehicles (LDVs). [8.2, 8.3, 11.13]	Clarification
TS	49	26		Inserted the word "transport"	Consistency
TS	50	1		Replaced figure with updated version where CO ₂ had been corrected to CO ₂ e.	Clarification
TS	50	2	11	Caption of Figure TS.21, inserted: 1) 'eq' after all four instances of CO ₂ to read CO ₂ e; 2) WACC: Weighted average cost of capital.	Clarification

TS	50	10	11	Replaced sentence "For details on methodology, input data and assumptions see Annex III." by a sentence in parenthesis at the end of the previous sentence, that reads "(see Annex III, Section A.III.3 for data and assumptions on emission intensities and cost calculations and Annex II, Section A.II.3.1 for methodological issues on levelized cost metrics)".	Clarification
TS	50	14	18	Deleted sentence "Over the medium-term (up to 2030) to long-term (to 2050 and beyond), urban redevelopment and new infrastructure, linked with land use policies, could evolve to reduce GHG intensity through more compact urban form, integrated transit, and urban planning oriented to support cycling and walking. This could reduce GHG emissions by 20-50% compared to business-as-usual." and replaced it with "Over the medium-term (up to 2030) to long-term (to 2050 and beyond), urban redevelopment and investments in new infrastructure, linked with integrated urban planning, transit-oriented development, and more compact urban form that supports cycling and walking can all lead to modal shifts. Such mitigation measures are challenging, have uncertain outcomes and could reduce transport GHG emissions by 20-50% compared to baseline (limited evidence, low agreement)."	Consistency
TS	50	17	18	Remove sentence "This could reduce GHG emissions by 20-50% compared to business-as-usual."	Consistency
TS	51	2		Insert corrected replacement sentence: Altogether, the total range of emissions reduction by all avoided travel is more uncertain than the 20-50% projected for urban transport in 2050, but most likely will be considerably less than 50% (low evidence, low agreement).	Consistency
TS	51	9		Replaced figure with updated version where CO2 had been corrected to CO2eq.	Clarification
TS	51	10	18	Caption of Figure TS.22, inserted: 1) 'eq' after all three instances of CO2 to read CO2eq; 2) LNG: Liquefied natural gas; WACC: Weighted average cost of capital.	Clarification
TS	51	17	18	Replaced sentence "For details on methodology, input data and assumptions see Annex III." by a sentence in parenthesis at the end of the previous sentence, that reads "(see Annex III, Section A.III.3 for data and assumptions on emission intensities and cost calculations and Annex II, Section A.II.3.1 for methodological issues on levelized cost metrics)".	Clarification
TS	52	3		Inserted 'eq' to read '(USD / tCO2eq avoided)'	Consistency
TS	52	8		Included "emissions reduction" to read: "...have relatively low emissions so their emissions reduction potential is limited."	Clarification
TS	52	23		Replaced "transport" with "low-carbon"	Clarification
TS	52	27		Inserted 'GHG' to read 'price instruments on GHG emissions'	Clarification
TS	52	34	3	Deleted "In least developed countries, prioritizing access to pedestrians, integrating non-motorized and public transport services, and managing excessive road speed for both urban and rural travellers can result in higher levels of economic and social prosperity. In fast-growing, emerging economies, investments in mass transit and other low-carbon transport infrastructure can help avoid future lock-in to carbon intensive modes. In OECD countries, advanced vehicle technologies could play a bigger role than structural and behavioural changes since economic growth will be slower than for non-OECD countries. (limited evidence, medium agreement)." and replaced with "Prioritizing infrastructure for pedestrians, integrating non-motorized and transit services, and managing excessive road speed for both urban and rural travellers can create economic and social co-benefits in all regions. For all economies, especially those with high rates of urban growth, investments in public transport systems and low-carbon infrastructure can avoid lock-in to carbon intensive modes. Established infrastructure may limit the options for modal shift and lead to a greater reliance on advanced vehicle technologies; a slowing of growth in LDV demand is already evident in some OECD countries. (medium evidence, medium agreement)."	Consistency
TS	53	6		Inserted "mitigation" to read "Transport mitigation strategies..."	Clarification
TS	53	7		Inserted "access and" to read "...improved access and mobility..."	Consistency
TS	54	3		Inserted sentence from table into caption: "For possible upstream effects of low-carbon electricity, see Table TS.4. For possible upstream effects of biomass supply, see Table TS.8."	Clarification
TS	54	6		Table TS.4: first column, third row, replaced "measures" by "fuels"	Clarification
TS	54	6		Table TS.4: first column, sixth row, inserted "distance" to read "journey distance reduction"	Clarification
TS	54	6		Table, column 'Social' first row: changed 'Noise' to 'Health impact via reduced noise'; third row: inserted 'physical' before 'activity'.	Clarification
TS	55	2		Inserted footnote to clarify what is covered under the buildings sector: " The building sector covers the residential, commercial, public and services sectors; emissions from construction are accounted for in the industry sector."	Consistency
TS	55	4	6	Replaced sentence with updated numbers and adjusted uncertainty qualifier to read: The building sector also accounted for 32% of total global final energy use, approximately one-third of black carbon emissions, and an eighth to a third of F-gases, with significant uncertainty (medium evidence, medium agreement)	Error Correction
TS	55	6		Inserted reference to (Figure TS.3)	Clarification

TS	55	14		Inserted "and related" to read "...from the long lifespans of buildings and related infrastructure..."	Consistency
TS	55	18	19	Inserted the word "change" after "lifestyle" and moved the word "urbanization" for the updated sentence to read: "Improvements in wealth, lifestyle change, the provision of access to modern energy services and adequate housing, and urbanization will drive the increases in building energy demand..."	Clarification
TS	55	20	22	Restructured sentence and included correct numbers. The adjusted sentence reads: "The manner in which those without access to adequate housing (about 0.8 billion people), modern energy carriers, and sufficient levels of energy services including clean cooking and heating (about 3 billion people) meet these needs will influence the development of building related emissions."	Error Correction
TS	55	27	29	Deleted the word "proliferation of"	Consistency
TS	55	46		Inserted "baseline scenarios which anticipate an increase of "	Clarification
TS	56	9	15	Included new caption text to be more consistent with newly designed figure: Final energy demand reduction relative to baseline (left panel) and development of final low carbon energy carrier share in final energy (from electricity; right panel) in buildings 2030 and 2050 in mitigation scenarios from three different CO ₂ e concentrations ranges shown in boxplots (see Section 6.3.2) compared to sectoral studies shown in shapes assessed in Chapter 9. Filled circles correspond to sectoral studies with full sectoral coverage while empty circles correspond to studies with only partial sectoral coverage (e.g., heating and cooling). [Figures 6.37 and 6.38]	Consistency
TS	56	24	25	Inserted 'those of marginal' to read '...at costs lower than those of marginal energy supply...'	Clarification
TS	57	1	3	Restructured sentence to read: "A three- to five-fold difference in energy use has been shown for provision of similar building-related energy service levels in buildings."	Consistency
TS	57	4	6	Adjusted sentence according to final SPM text to read: "For developed countries, scenarios indicate that lifestyle and behavioural changes could reduce energy demand by up to 20% in the short term and by up to 50% of present levels by mid-century (medium evidence, medium agreement)."	Consistency
TS	57	16		Adjusted section reference to read: [9.6, 9.7]	Consistency
TS	57	17		Inserted the word 'based' to read 'market-based'	Consistency
TS	57	20		removed energy poverty as not clearly shown as co-benefit in Table TS.5	Error Correction
TS	57	25		Replaced the word 'levels' with 'stages'	Consistency
TS	57	26		Adjusted section reference to read: [9.8, 9.10]	Consistency
TS	57	30		Inserted 'GHG' to read 'saving GHG emissions'	Clarification
TS	57	32		Inserted 'energy performance' to read 'such as building and appliance energy performance standards and labels...'	Clarification
TS	57	34		Replaced 'demonstrated the feasibility of' with 'contributed to'	Clarification
TS	57	37	38	Inserted the word 'standards' for clarification	Clarification
TS	57	39		Included "due to larger capital requirements" for clarification	Clarification
TS	57	40		Adjusted section reference to read: [9.10]	Clarification
TS	58	3		Inserted sentence from table into caption: "For possible upstream effects of fuel switching and RE, see Table TS.4."	Clarification
TS	59	5		Inserted 'private' to read 'negative private cost'	Clarification
TS	59	23		Inserted "In 2010, the industry sector accounted for around 28% of final energy use, and ..." according to SPM approved text.	Consistency
TS	59	27	28	Included half sentence: "Despite the declining share of industry in global GDP..."	Clarification
TS	59	27		Inserted "(of which waste/wastewater accounted for 1.4 GtCO ₂ e)."	Clarification
TS	59	27		Corrected number to read: "...to 15 GtCO ₂ -eq in 2010."	Error Correction
TS	59	28		Reformulated sentence to read: "Carbon dioxide emissions from industry, including direct and indirect emissions as well as process emissions,..."	Consistency
TS	59	33		Removed sentence and included it in first section paragraph in connection with recent emission growth in the industry sector	Consistency
TS	59	35	36	Deleted sentence, in order to include it in the preceding paragraph	Clarification
TS	59	35		Inserted the words "upgrading, replacement and" to read "The wide-scale upgrading, replacement and deployment of best available technologies..."	Consistency
TS	59	36	37	Reformulated sentence to read: "could directly reduce the energy intensity of the industry sector by about 25% compared to the current level,..."	Consistency
TS	59	41		Replaced "are the most prevalent" with "are a prevalent"	Consistency
TS	59	43		Adjusted section reference to read: [10.4, 10.7, 10.9, 10.11]	Consistency
TS	60	3	4	Inserted "Lack of policy and experiences in material and product service efficiency are major barriers."; deleted uncertainty qualifier and inserted reference to Section 10.11.	Consistency
TS	60	6		[Figure 10.2] instead of [Figure 10.1]	Consistency
TS	60	11	12	Replaced "stringent mitigation scenarios" with "in mitigation scenarios not exceeding 650ppm CO ₂ e by 2100 relative to baseline scenarios"	Clarification
TS	60	19		Inserted 'GHG' to read 'direct GHG emissions'	Clarification
TS	60	23		Inserted term 'globally'.	Consistency
TS	60	26		Inserted 'GHG' to read 'reducing GHG emissions'	Clarification

TS	61	3	8	Final energy demand reduction relative to baseline (left panel) and development of final low carbon energy carrier shares in final energy (including electricity, heat, hydrogen, and bioenergy; right panel) in industry by 2030 and 2050 in mitigation scenarios from three different CO ₂ eq concentration ranges shown in boxplots (see Section 6.3.2) compared to sectoral studies shown in shapes assessed in Chapter 10. Filled circles correspond to sectoral studies with full sectoral coverage. [Figures 6.37 and 6.38]	Consistency
TS	61	10		Replaced 'intensity' with 'efficiency' to read '... product service efficiency'	Clarification
TS	61	16		Inserted "CH ₄ , N ₂ O and fluorinated gases from industry accounted for emissions of 0.9 GtCO ₂ eq in 2010."	Consistency
TS	61	22		Inserted reference to Table 10.2.	Consistency
TS	61	23	25	Rephrased sentence according to approved SPM text to read: "Systemic approaches and collaborative activities across companies (large energy intensive industries and Small and Medium Enterprises (SMEs)) and sectors can help to reduce GHG emissions."	Consistency
TS	62	14		Included word to clarify meaning: enhanced competitiveness THROUGH cost reductions	Clarification
TS	64	3	7	Caption of Figure TS.27, inserted: 1) the term 'Indicative' to read 'd) Indicative global CO ₂ eq emissions for chemicals production; 2) DRI: Direct reduced iron; EAF: Electric arc furnace.	Clarification
TS	64	13	15	Caption of Figure TS.28, inserted: 1) 'eq' to read 'Indicative CO ₂ eq emission intensities...' 2) MSW: Municipal solid waste.	Clarification
TS	65	3		Inserted sentence from table into caption: "For possible upstream effects of low-carbon energy supply (includes CCS), see Table TS.4. For possible upstream effects of biomass supply, see Table TS.8."	Clarification
TS	65	7		Table TS.6, column 'Social', row 'Product demand reductions': Deleted "Local conflicts (reduced inequity in consumption) (I / I)" and changed "New diverse lifestyle concept" to "Wellbeing via diverse lifestyle choices".	Error Correction
TS	66	2	3	Inserted 'GHG' to read 'GHG emissions from the AFOLU sector have stabilized but the share of total anthropogenic GHG emissions has decreased'	Clarification
TS	66	4		Replaced 5.3 GtCO ₂ -eq/yr with 5.0–5.8 GtCO ₂ eq/yr	Consistency
TS	66	4		Replaced 9-12 GtCO ₂ -eq in 2000-2009 by 10–12 GtCO ₂ eq in 2000–2010	Error Correction
TS	66	5		Replaced 4-7 GtCO ₂ -eq/y with 4.3–5.5 GtCO ₂ eq/yr	Consistency
TS	66	8		Replaced 5.2-5.8 GtCO ₂ -eq/yr with 5.0–5.8 GtCO ₂ eq/yr	Consistency
TS	66	10		Inserted "and increased afforestation..."	Consistency
TS	66	16	19	Rephrased sentences according to approved SPM text to read: "Net annual baseline CO ₂ emissions from AFOLU are projected to decline over time with net emissions potentially less than half of the 2010 level by 2050, and the possibility of the AFOLU sector becoming a net sink before the end of century. However, the uncertainty in historical net AFOLU emissions is larger than for other sectors, and additional uncertainties in projected baseline net AFOLU emissions exist."	Consistency
TS	66	32		Inserted 'and' to read 'in particular reducing deforestation and land and livestock management,'	Clarification
TS	66	34	37	Replaced 'is limited evidence' with 'are still few studies' to avoid using incomplete uncertainty language terms within a sentence.	Error Correction
TS	67	11	12	Rephrased sentence according to approved SPM text to read: "Among supply-side measures, the most cost-effective forestry options are afforestation, sustainable forest management and reducing deforestation, with large differences in their relative importance across regions;..."	Consistency
TS	67	12		Inserted footnote as in SPM to clarify term carbon price: "In many models that are used to assess the economic costs of mitigation, carbon price is used as a proxy to represent the level of effort in mitigation policies (see Glossary)."	Consistency
TS	67	16		Replaced 13.78 GtCO ₂ eq/yr with 10.6 GtCO ₂ eq/yr - previous range (i.e. 13.78 GtCO ₂ eq/yr value) included a forest only study whereas range should only be provided for studies that do both agriculture and forestry	Error Correction
TS	67	16		Replaced "7.18 to 10.60 (full range: 0.49-13.78)" with "7.18 to 10.6 (full range of all studies : 0.49–10.6)" and inserted "in 2030 for mitigation efforts consistent with..." to read "the economic mitigation potential in the AFOLU sector is estimated to be 7.18 to 10.6 (full range of all studies: 0.49–10.6) GtCO ₂ eq/yr in 2030 for mitigation efforts consistent with carbon prices up to 100 USD/ tCO ₂ eq,..."	Consistency
TS	67	23	25	Rephrased sentence according to approved SPM text to read: "While demand-side measures are under-researched, changes in diet, reductions of losses in the food supply chain, and other measures have a significant, but uncertain, potential to reduce GHG emissions from food production (0.76–8.55 GtCO ₂ eq/yr by 2050)."	Consistency
TS	67	25		Replaced (0.76-9.31 GtCO ₂ -eq/yr by 2050) with (0.76–8.55 GtCO ₂ eq/yr by 2050) due to accounting error in underlying spreadsheet and (limited evidence, low agreement) with (limited evidence, medium agreement)	Error Correction
TS	68	1		Figure TS.30 Updated figure according to counting error - maximum value for supply side measures now 8.55 GtCO ₂ eq/yr	Error Correction
TS	68	10		Included reference to 11.6.2	Consistency

TS	70	2		Inserted sentence "Some mitigation options in the AFOLU sector (such as soil and forest carbon stocks) may be vulnerable to climate change." for consistency with SPM.	Consistency
TS	70	11		Inserted reference to Section 11.3.2.	Consistency
TS	70	22	17	Replaced 4 paragraphs on pages from page 70 line 22 to page 71 line 17 with SPM approved text: "Bioenergy can play a critical role for mitigation, but there are issues to consider, such as the sustainability of practices and the efficiency of bioenergy systems (robust evidence, medium agreement) [11.4.4, Box 11.5, 11.13.6, 11.13.7]. Barriers to large-scale deployment of bioenergy include concerns about GHG emissions from land, food security, water resources, biodiversity conservation and livelihoods. The scientific debate about the overall climate impact related to land-use competition effects of specific bioenergy pathways remains unresolved (robust evidence, high agreement). [11.4.4, 11.13] Bioenergy technologies are diverse and span a wide range of options and technology pathways. Evidence suggests that options with low lifecycle emissions (e.g., sugar cane, Miscanthus, fast growing tree species, and sustainable use of biomass residues), some already available, can reduce GHG emissions; outcomes are site-specific and rely on efficient integrated 'biomass-to-bioenergy systems', and sustainable land-use management and governance. In some regions, specific bioenergy options, such as improved cookstoves, and small-scale biogas and biopower production, could reduce GHG emissions and improve livelihoods and health in the context of sustainable development (medium evidence, medium agreement). [11.13]"	Consistency
TS	70	39		replaced 3 billion by correct number 2.6 billion people (according to WEO published within the official literature cut-off date for the WGIII AR5	Error Correction
TS	71	21	22	Rephrased text according to SPM approved text: "As of 2011, more than 52% of the world's population..."	Consistency
TS	71	26	28	Replaced sentence "Urban areas account for 67-76% of 26 global energy use and 71-76% of global energy-related CO2 emissions. Using Scope1 accounting, 27 urban share of global CO2 emissions is 44% (Figure TS.31)." with updated sentence to clarify Scope 1 and 2 accounting.	Consistency
TS	71	31	33	Figure TS.31 caption: Updated figure caption to be consistent with new figure: Estimated shares of direct (Scope 1) and indirect urban CO2 emissions in total emissions across world regions (GtCO2). Indirect emissions (Scope 2) allocate emissions from thermal power plants to urban areas. [12.2.2, Figure 12.4] and inserted: CPA: Centrally Planned Asia and China; EEU: Central and Eastern Europe; FSU: Former Soviet Union; LAM: Latin America and Caribbean; MNA: Middle East and North Africa; NAM: North America; PAS: South-East Asia and Pacific; POECD: Pacific OECD; SAS: South Asia; SSA: Sub Saharan Africa; WEU: Western Europe.	Consistency
TS	72	10	11	Rephrased sentence according to approved SPM text: "). Accounting for trends in declining population densities, and continued economic and population growth, urban land cover is projected to expand by 56–310% between 2000 and 2030."	Consistency
TS	72	15	17	Removed sentence	Error Correction
TS	72	29		Replacing "high land use mixes" with "achieving high diversity and integration of land uses"	Clarification
TS	72	33	35	Rephrased sentence according to SPM approved text: "The largest opportunities for future urban GHG emissions reduction might be in rapidly urbanizing countries where urban form and infrastructure are not locked-in but where there are often limited governance, technical, financial, and institutional capacities can be limited (robust evidence, high agreement)."	Consistency
TS	72	38	39	Rephrased sentence according to SPM approved text: "Thousands of cities are undertaking climate action plans, but their aggregate impact on urban emissions is uncertain ..."	Consistency
TS	72	41	43	Rephrased sentence according to SPM approved text: "However, little systematic assessment regarding the overall extent to which cities are implementing mitigation policies and emission reduction targets are being achieved, or emissions reduced."	Consistency
TS	72	45		Inserted reference to section 12.9	Consistency
TS	73	2	3	Figure TS.32 caption: Inserted sentence from figure caption text in underlying chapter to read "The dark blue row segments under the VKT elasticities column provide the range of elasticities for the studies included." Also inserted: CBD: Central business district.	Clarification
TS	74	25		Adjusted uncertainty qualifier according to SPM	Consistency
TS	74	25		Inserted sentence for consistency with related SPM text: "Urban areas throughout the world continue to struggle with challenges, including ensuring access to energy, limiting air and water pollution, and maintaining employment opportunities and competitiveness. Action on urban-scale mitigation often depends on the ability to relate climate change mitigation efforts to local co-benefits."	Consistency

TS	84	2	14	Replace caption by "Figure TS.36. Economic and governance indicators affecting regional capacities to embrace mitigation policies. Statistics refer to the year 2010 or the most recent year available. Note: The lending interest rate refers to the average interest rate charged by banks to private sector clients for short- to medium-term financing needs. The governance index is a composite measure of governance indicators compiled from various sources, rescaled to a scale of 0 to 1, with 0 representing weakest governance and 1 representing strongest governance. [Figure 14.2]"	Consistency
TS	86	7	11	Replaced caption by "Alternative forms of international cooperation. The figure represents a compilation of existing and possible forms of international cooperation, based upon a survey of published research, but is not intended to be exhaustive of existing or potential policy architectures, nor is it intended to be prescriptive. Examples in orange are existing agreements. Examples in blue are structures for agreements proposed in the literature. The width of individual boxes indicates the range of possible degrees of centralization for a particular agreement. The degree of centralization indicates the authority an agreement confers on an international institution, not the process of negotiating the agreement. [Figure 13.2]"	Consistency
TS	86	7		Insert legend: "Legend: Loose coordination of policies: examples include transnational city networks or NAMAs; R&D technology cooperation: examples include the Major Economies Forum on Energy and Climate (MEF), Global Methane Initiative (GMI), or Renewable Energy and Energy Efficiency Partnership (REEEP); Other international organization (IO) GHG regulation: examples include the Montreal Protocol, International Civil Aviation Organization (ICAO), International Maritime Organization (IMO); See Figure 13.1 for the details of these examples."	Consistency
TS	87	37		Replace "even in the absence of" by "without the Protocol in economies in transition".	Error Correction
TS	89	4		Replaced "stabilize" by "reach".	Clarification
TS	90	4		Replaced "stabilize" by "reach".	Clarification
TS	92	13	14	Replace "funding provided to developing countries by Annex II Parties for climate related activities" by "not well-defined. Annex II Parties provide and mobilize funding for climate related activities in developing countries".	Clarification