

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
83469	3	23	3	23	In Chapters 1 and 2 you use 125 ka as peak (or at least I assume that age is supposed to reflect the peak) but here you write 127 ka. [Antje H. L. Voelker, Portugal]	Not applicable. Annex removed from the FGD
7483	3	32			<p>I suggest the inclusion of the Anthropocene (1950-Present) within the post glacial list, in agreement with IPCC SR1.5-2018 where this period of time is mentioned and explained in Chapter 1 (Box 1.1 of pages 8-9, and pages 5, 7, 35, 38 and 40) and Glossary.</p> <p>This comment is related to the paleo "reference periods" which are used in multiple chapters of AR6. These periods are based on geochemical and paleontological analysis of sediments and materials from natural archives. The list of reference periods is divided into two parts: (1) Deep past (Cenozoic Era) and (2) post glacial (past 8000 years). Within each part, the list progresses from oldest to youngest reference period.</p> <p>This suggestion is supported by the following statements, some of them included in this WRI AR6:</p> <p>i)-The SR1.5 is a joint product of all three working groups and this special reports was released during the sixth IPCC assessment cycle. This evolution towards a more integrated assessment reflects a broader understanding of the interconnectedness of important aspects of the issues posed by human induced climate change (Chapter 1, page 9, lines 33-35).</p> <p>ii)-In 2013, the WGI contribution to the AR5 (AR5 WGI) concluded that "warming of the climate system is unequivocal" and that since the 1950s, many of the observed changes are unprecedented over decades to millennia (IPCC, 2013a). (Chapter 1, page 10, lines 41-44).</p> <p>iii)-The rate, scale, and magnitude of anthropogenic changes in the climate system since the mid-20th century support the concept of an Anthropocene Epoch (Crutzen and Stoermer, 2000; Steffen et al., 2007), i.e., an era in which human activity is altering major components of the Earth system on a magnitude and scale similar to geophysical forces, leaving measurable traces which will remain in the permanent geological record (IPCC, 2018b) (Figure 1.3) (Chapter 1, page 14, lines 27-31).</p> <p>iv)-The WGI AR5 assessed that warming of the climate system is unequivocal and that many of the observed changes since 1950 are unprecedented over decades to millennia (Chapter 1, page 31, lines 19-20).</p> <p>v)-It is true that "Anthropocene" is an informal geological term not yet officially accepted within the geological science, but so it is "Tertiary" and it appears in (Chapter 1, page 31, line 52).</p> <p>vi)-Total number of scientific publications that include the term Anthropocene since the year 2001 is 4876 (Web of Science, April 27th 2020). [Alejandro Cearreta, Spain]</p>	Not applicable. Annex removed from the FGD
83471	3	34	3	34	if you want to keep the distinction between ka/Ma for a date and kyr/Myr for duration or ratio you should add an explanation here in the annex. It might also be smart to repeat the footnote on the meaning of ka/Ma/CE here. [Antje H. L. Voelker, Portugal]	Not applicable. Annex removed from the FGD
109027	4	12	4	12	Turney et al., in reveiw', please correct and update [Belen Martrat, Spain]	Not applicable. Annex removed from the FGD
39613	4		4		Line LGM CH4 : report Rhodes et al., 2015, instead of Rhodes et al., 2013. Rhodes et al. (2013) only discuss the last milenium. [Xavier Fain, France]	Not applicable. Annex removed from the FGD
39615	4		4		Line LGM CH4 : remove Mitchell et al., 2011 (which reports about the last milenium CH4) [Xavier Fain, France]	Not applicable. Annex removed from the FGD
39617	4		4		The Hoenisch 2009 paper is not listed in the reference list. Note that this paper discusses CO2 during the last 2.1 million year, and provides very low resolution CO2 reconstruction over the LIG. Note sure if it is a relevant citation for LIG CO2. [Xavier Fain, France]	Not applicable. Annex removed from the FGD
39619	4		4		I am not aware of a paper form Raitzch et al., 2018, discussing CO2 during the LIG. This paper is missing to the reference list. Would be good to check this. [Xavier Fain, France]	Not applicable. Annex removed from the FGD

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39621	4		4		Line LDT CH4: Rhodes et al (2015) is the higher resolution record available for Southern Hemisphere. Not sure if one wants to add references of lower resolution records, such a Petit et al. (1999) [Xavier Faïn, France]	Not applicable. Annex removed from the FGD
42933	4				LIG temperature should include Hoffman 2017, probably the best supported of the reconstructions. Snyder is OK for the last 3 Ma but is not specifically a reconstruction of the LIG and seems not to be used in the Chapter 2 assessment. [Eric Wolff, United Kingdom (of Great Britain and Northern Ireland)]	Not applicable. Annex removed from the FGD
83473	5		5		For Biosphere LGM and LDT, an additional reference could be the database compiled by Sánchez Goñi, M.F., Desprat, S., Daniau, A.L., Bassinot, F.C., Polanco-Martínez, J.M., Harrison, S.P., Allen, J.R.M., Anderson, R.S., Behling, H., Bonnefille, R., Burjachs, F., Carrión, J.S., Cheddadi, R., Clark, J.S., Combouret-Nebout, N., Mustaphi, Debusk, G.H., Dupont, L.M., Finch, J.M., Fletcher, W.J., Giardini, M., González, C., Gosling, W.D., Grigg, L.D., Grimm, E.C., Hayashi, R., Helmens, K., Heusser, L.E., Hill, T., Hope, G., Huntley, B., Igarashi, Y., Irino, T., Jacobs, B., Jiménez-Moreno, G., Kawai, S., Kershaw, A.P., Kumon, F., Lawson, I.T., Ledru, M.P., Lézine, A.M., Liew, P.M., Magri, D., Marchant, R., Margari, V., Mayle, F.E., McKenzie, G.M., Moss, P., Müller, S., Müller, U.C., Naughton, F., Newnham, R.M., Oba, T., Pérez-Obiol, R., Pini, R., Ravazzi, C., Roucoux, K.H., Rucina, S.M., Scott, L., Takahara, H., Tzedakis, P.C., Urrego, D.H., van Geel, B., Valencia, B.G., Vandergoes, M.J., Vincens, A., Whitlock, C.L., Willard, D.A., Yamamoto, M., 2017. The ACER pollen and charcoal database: a global resource to document vegetation and fire response to abrupt climate changes during the last glacial period. Earth Syst. Sci. Data 9, 679-695, doi: 10.5194/essd-9-679-2017. [Antje H. L. Voelker, Portugal]	Not applicable. Annex removed from the FGD
43019	6	3	6	3	Rubino et al. (2019) is cited in the table, but it misses from the reference list. Also, it should be associated to CH4 as well at page 6 line 5 [Mauro Rubino, Italy]	Not applicable. Annex removed from the FGD
109029	6	27	6	27	For section modes of variability please check references in Hernandez et al., 2020, Earth-Science Reviews [Belen Martrat, Spain]	Not applicable. Annex removed from the FGD
116799					Thank you for this first version for Annex II. Could it be possible to highlight novel datasets compared to AR5, or major changes to datasets compared to AR5, in the Introduction? Please also make sure that the Annex is cited in relevant chapters (provide guidance). It would also be good if there would be links to specific elements of chapters using the datasets (corresponding tables, figures). There is also a need of coordination with the annex on modes of variability which refers to proxy based reconstructions, also relevant for this annex. It is important to check that proxy reconstructions used in the report are the ones mentioned in the annex on modes and here too. [Valerie Masson-Delmotte, France]	Not applicable. Annex removed from the FGD

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2039					A new reference and temperature values could be added as further information for the EECO. See study with following reference: E.M. Crouch, C.L. Shepherd, H.E.G. Morgans, B.D.A. Naafs, E. Dallanave, A. Phillips, C.J. Hollis, R.D. Pancost (2020). Climatic and environmental changes across the early Eocene climatic optimum at mid-Waipara River, Canterbury Basin, New Zealand. Earth-Science Reviews 200, 102961. https://doi.org/10.1016/j.earscirev.2019.102961 [Sebastian Naeher, New Zealand]	Not applicable. Annex removed from the FGD