Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					Add glossary "southern flooding and northern" [Vivien How,	As per standard IPCC procedure, the glossary was not part of the
90881					Malaysia]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Add gloasary "Somali Jet" [Vivien How, Malaysia]	As per standard IPCC procedure, the glossary was not part of the
90883						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Add 'medicane' [Emer Griffin, Ireland]	As per standard IPCC procedure, the glossary was not part of the
77643						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Add 'essential climate variable (ECV)' [Emer Griffin, Ireland]	As per standard IPCC procedure, the glossary was not part of the
77649						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Add 'climate velocity' [Emer Griffin, Ireland]	As per standard IPCC procedure, the glossary was not part of the
77651						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Please add the definition of emergence. Check coherency of	As per standard IPCC procedure, the glossary was not part of the
116053					glossary terms with Box SPM1 [Valerie Masson-Delmotte,	SOD review, so no response to this comment is provided here.
					France]	The comment has, however, been considered.
					Add 'coastline accretion' [Emer Griffin, Ireland]	As per standard IPCC procedure, the glossary was not part of the
77659						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Define "actionable" climate information [Valerie Masson-	As per standard IPCC procedure, the glossary was not part of the
116081					Delmotte, France]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Add glossary "ocean heat content (OHC)" [Vivien How, Malaysia]	As per standard IPCC procedure, the glossary was not part of the
93555						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					It is difficult to track what definitions have been modified	As per standard IPCC procedure, the glossary was not part of the
115579					compared to AR5 or special reports (and why). My comments are	SOD review, so no response to this comment is provided here.
115575					focused on some choices of terms and some missing terms	The comment has, however, been considered.
					[Valerie Masson-Delmotte, France]	
					Please consider the following terms : Anthropocene (used in	As per standard IPCC procedure, the glossary was not part of the
					chapter 1, introduced in AR6 SR15 glossary); model tuning ; data	SOD review, so no response to this comment is provided here.
					assimilation ; behaviour in a WGI sense (as used in chapters, eg.	The comment has, however, been considered.
115581					behaviour of the climate system, or of models; the current	
115501					definition is related to human behaviour); climate information.	
					Please add missing terms (eg. climate forecast); confidence in the	
					sense of "confidence in projections". [Valerie Masson-Delmotte,	
					France]	
					Cross-references in between definitions and related terms need	As per standard IPCC procedure, the glossary was not part of the
					work. Examples : climatic impact drivers need to be related to	SOD review, so no response to this comment is provided here.
					hazards and risks; ice ages need to be related to glacial cycles,	The comment has, however, been considered.
115583					glacial terminations, interglacial periods; climate impact drivers	
115505					to "drivers". GWP could be related to residence time and	
					atmospheric lifetime too ; GHG to well mixed GHG; ground level	
					ozone to GHG; isotopes can link to 13C or 14C. [Valerie Masson-	
					Delmotte, France]	

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					Please consider carefully all paleoclimate related terms, and	As per standard IPCC procedure, the glossary was not part of the
					decide which ones are introduced. I suggest to also include as a	SOD review, so no response to this comment is provided here.
115585					specific term "Last Interglacial", "Eocene", "Pliocene" (more	The comment has, however, been considered.
					broadly than the specific periods of interest). [Valerie Masson-	
					Delmotte, France]	
					It would be helpful to clarity differences between emulators and	As per standard IPCC procedure, the glossary was not part of the
					simple climate models, and the use of these terms in various	SOD review, so no response to this comment is provided here.
					chapters. The definitions suggest that they can reproduce the	The comment has, however, been considered.
115587					behaviour of more complex models, but do not stress what could	
					be limitations to their use. This could be relevant. [Valerie	
					Masson-Delmotte, France]	
					I suggest to relate "fingerprint" to "detection". [Valerie Masson-	As per standard IPCC procedure, the glossary was not part of the
115589					Delmotte, France]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					I suggest to consider relating "fitness for purpose" to "deep	As per standard IPCC procedure, the glossary was not part of the
115591					uncertainty" [Valerie Masson-Delmotte, France]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					The definition of "global dimming" could be expanded to	As per standard IPCC procedure, the glossary was not part of the
115593					descrive causes (it is very elusive currently). [Valerie Masson-	SOD review, so no response to this comment is provided here.
					Delmotte, France]	The comment has, however, been considered.
					All definitions from SR15 need to be carefully checked compared	As per standard IPCC procedure, the glossary was not part of the
					to the approach chosen and implemented in AR6 WGI. Examples	SOD review, so no response to this comment is provided here.
					include GMST (where the definition currently says "near surface	The comment has, however, been considered.
115595					air temperature over both land and oceans are also used", which	
					I think is not adequate here). Same remark for the definition of	
					global warming. [Valerie Masson-Delmotte, France]	
					Could it be possible to nuance the definition of well mixed GHG	As per standard IPCC procedure, the glossary was not part of the
115597					for methane? [Valerie Masson-Delmotte, France]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Could the definition of habitability (here from SROCC) be	As per standard IPCC procedure, the glossary was not part of the
					checked across WG (especially with WGII), as it is very human	SOD review, so no response to this comment is provided here.
115599					centric, but is also used for ecosystems (e.g. habitable surface	The comment has, however, been considered.
115555					area)? I also know that the term has a sense of planetary	
					habitability (for exoplanets). [Valerie Masson-Delmotte, France]	
115001					Could wet bulb temperature be introduced and linked to heat	As per standard IPCC procedure, the glossary was not part of the
115601					stress [Valerie Masson-Delmotte, France]	SOD review, so no response to this comment is provided here.
					the second the location of a tilter of the state of a second state of the	The comment has, however, been considered.
					I suggest to harmonize the definitions of past periods. Please	As per standard IPCC procedure, the glossary was not part of the
115603					check the definition of Holocene thermal maximum (it cannot be	
					a millenial scale interval that occurred at different times in	The comment has, however, been considered.
					different regions if it is a period). [Valerie Masson-Delmotte, France]	
					I suggest to link (Marine Isotopic Stages (MIS) to specific periods	As per standard IPCC procedure, the glossary was not part of the
115005			1			
115605					mentioned in the report (MIS1, MIS5 etc) (currently vague).	SOD review, so no response to this comment is provided here.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					I suggest to introduce the definition of the Last Interglacial	As per standard IPCC procedure, the glossary was not part of the
115607					separated from interglacial periods. [Valerie Masson-Delmotte,	SOD review, so no response to this comment is provided here.
					France]	The comment has, however, been considered.
					I suggest to introduce the a definition for "state of the climate	As per standard IPCC procedure, the glossary was not part of the
					system" used throughout chapters and link this to "key	SOD review, so no response to this comment is provided here.
115609					indicators" (indicators of the state of the climate system).	The comment has, however, been considered.
					[Valerie Masson-Delmotte, France]	
					I suggest to introduce the a definition for "elevation dependent	As per standard IPCC procedure, the glossary was not part of the
					warming (EDW)" introduced in SROCC (check with chapter 10	SOD review, so no response to this comment is provided here.
115611					and aspects related to high mountains, ex in SROCC chapter 2,	The comment has, however, been considered.
					box 2.1). This could be related to "lapse rate". [Valerie Masson-	
					Delmotte, France]	
					"Lifetime", "response time" gives an approximate value of 100	As per standard IPCC procedure, the glossary was not part of the
						SOD review, so no response to this comment is provided here.
					of chapter 5 assessment. AR5 stressed that "After 2000 years, the	
					atmosphere will still contain between 15% and 40% of those	, ,
115613					initial CO2 emissions" (FAQ 6.2, response to pulse CO2 emissions,	
110010					also stressing longer timescales related to carbonate sediment	
					dissolution, and reactions with igneous rocks, such as silicate	
					weathering and sediment burial. [Valerie Masson-Delmotte,	
					France]	
					Please check definition of "Little Ice Age" and "Medieval Warm	As per standard IPCC procedure, the glossary was not part of the
					•	
115615					Period" from AR5, still using NH land temperature	SOD review, so no response to this comment is provided here.
115615					reconstructions (from AR5) as a reference (update, complement	The comment has, however, been considered.
					with improved spatial coverage of existing records). [Valerie	
					Masson-Delmotte, France]	
					"microclimate" is vague, I suggest to give a spatial scale. I also	As per standard IPCC procedure, the glossary was not part of the
					suggest to introduce urban climate explicitely (as a type of	SOD review, so no response to this comment is provided here.
115617					microclimate? And linked to urban heat island, sea breeze +	The comment has, however, been considered.
					coastal topography interplays etc). [Valerie Masson-Delmotte,	
					France]	
					"model initialization" is linked to "climate forecast" while	As per standard IPCC procedure, the glossary was not part of the
115619					"climate prediction" is in the glossary and not "climate forecast".	SOD review, so no response to this comment is provided here.
					[Valerie Masson-Delmotte, France]	The comment has, however, been considered.
					the term pan-Arctic should be introduced (possibly only in	As per standard IPCC procedure, the glossary was not part of the
61859					glossary would be enough [APECS, MRI, PAGES ECN, PYRN and	SOD review, so no response to this comment is provided here.
					YESS ECS group review, Canada]	The comment has, however, been considered.
					"model spread" refers to CMIP5 and should be updated to also	As per standard IPCC procedure, the glossary was not part of the
115621					encompass regional climate model spread. [Valerie Masson-	SOD review, so no response to this comment is provided here.
					Delmotte, France]	The comment has, however, been considered.
					"near term" etc, please check very carefully that this is the WGI	As per standard IPCC procedure, the glossary was not part of the
115(22)					definition, as other WG may use other definitions. A point of x	SOD review, so no response to this comment is provided here.
115623					WG coordination. [Valerie Masson-Delmotte, France]	The comment has, however, been considered.
					I suggest to remove the definition of "ocean carbon cycle" or	As per standard IPCC procedure, the glossary was not part of the
115625					provide more details. [Valerie Masson-Delmotte, France]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
115627					Terms like "slowdown" or "hiatus" are used in the report text but not defined here. [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115629					The definition of "pathways" uses the term "plausible", is it needed? (I have in mind debates about the plausibiliy of RCP8.5 for instance). [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115631					Permafrost : is it possible to add the definition of permafrost abrupt thaw? [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115633					Please check the use of terms such as "fast" and "rapid" across the glossary, they appear used with different meanings (eg rapid adjustment / rapid climate change / rapid dynamical change). Introducing the related timescales is needed. [Valerie Masson- Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115635					"regulation" : please check the use of the term in WGI drafts (eg regulation of harmful substances in chapter 1, or reference to the inclusion of adaptation 51 in public and private regulation in chapter 12) and make sure that the definition is relevant in the WGI context. [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115637					"remaining carbon budget" refers to year 2018 (from SR15), please check and update if needed. [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115639					Pease check the reference to "baseline scenario" within the AR6 + COVID19 context. [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115641					Pease check the definitions and use of "emulators" and "simple climate models" in WGI and x WG. [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115643					Please check the use of the term "removal" throughout the glossary. [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115645					Please check the use of the term "slushy' with the definition of methane clathrates [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115647					Please check the use of the term "methane" throughout the glossary. The definition needs a link to SLCF. There could be a need to nuance the use of the term well mixed GHG. [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115649					I do not think that the glossary needs a definition of "spatial and temporal scales" [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115651					"stadial" needs to be linked to Younger Dryas. [Valerie Masson- Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					The definition of "Sudden stratospheric warming" could explain	As per standard IPCC procedure, the glossary was not part of the
115653					the implications of breakdowns of stratospheric polar vortices.	SOD review, so no response to this comment is provided here.
112022					Note, they are not defined. [Valerie Masson-Delmotte, France]	The comment has, however, been considered.
					Do "surprises" include pandemics? Are they included in "low	As per standard IPCC procedure, the glossary was not part of the
115655					probability, high impact events"? [Valerie Masson-Delmotte,	SOD review, so no response to this comment is provided here.
					France]	The comment has, however, been considered.
					Check "temperature levels", as the current definition is	As per standard IPCC procedure, the glossary was not part of the
115657					inconsistent with the report (GSAT, against 1850-1900, not	SOD review, so no response to this comment is provided here.
115057					GMST, against 1750). Point of verification x WG. [Valerie Masson- Delmotte, France]	The comment has, however, been considered.
					Is the definition of "unknown unknown" needed? IF yes, it	As per standard IPCC procedure, the glossary was not part of the
115659					should be built x WG and coordinated / deep uncertainty.	SOD review, so no response to this comment is provided here.
					[Valerie Masson-Delmotte, France]	The comment has, however, been considered.
					Urban climate is missing [Valerie Masson-Delmotte, France]	As per standard IPCC procedure, the glossary was not part of the
115661					•	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Wet bulb temperature is missing. [Valerie Masson-Delmotte,	As per standard IPCC procedure, the glossary was not part of the
115663					France]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Add glossary "less developed countries" [Vivien How, Malaysia]	As per standard IPCC procedure, the glossary was not part of the
90877						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Add glossary "Volcanic eruptions" [Vivien How, Malaysia]	As per standard IPCC procedure, the glossary was not part of the
90879						SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Entire Glossary: Some entries still reference boxes or other terms	As per standard IPCC procedure, the glossary was not part of the
					that are not in THIS glossary. I believe this is a legacy issue,	SOD review, so no response to this comment is provided here.
					derived from the COGS. Please make sure the current AR6 WGI	The comment has, however, been considered.
131593	0				Glossary definitions are edited appropriately and do not contain	
151555	Ū				empty references. This will avoid confusion. I tried to highlight	
					the respective instances that were obvious to me. [Hans Poertner	
					and WGII TSU, Germany]	
					Glossary: consider adding the definition for 'PgC' - petagram (Pg)	As per standard IPCC procedure, the glossary was not part of the
					of Carbon - one Pg =1015 grams=one billion metric tonnes' also	SOD review, so no response to this comment is provided here.
103955	0				called 'carbon stocks' and 'PgC y-1' annual means of carbon	The comment has, however, been considered.
					budgets or annual carbon exchange fluxes. [Philippe Tulkens,	
					Belgium]	
					Please add the following terms to the glossary (compilation of	As per standard IPCC procedure, the glossary was not part of the
22204	0				our suggestions throughout the report): "tropical belt" (SPM),	SOD review, so no response to this comment is provided here.
32281	0				"intensification of the water cycle" (SPM), "drought potential"	The comment has, however, been considered.
					(SPM), "GTP" (Chapter 8), "HadCRUT" (TS). [Eric Brun, France]	
				1	Please add entries for specific GHG metrics discussed in this	As per standard IPCC procedure, the glossary was not part of the
07000	0				report, including GTP and GWP. Please explain basics like	SOD review, so no response to this comment is provided here.
97069	0				endpoint / instantaneous metrics vs integrated metrics, see Ch7.	The comment has, however, been considered.
					[Nicole Wilke, Germany]	

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
97071	0				The definition of "risk" seems inconsistent with the definition of "impact": "In the context of climate change, risks can arise from potential impacts of climate change as well as human responses to climate change" with impacts being defined as the "consequences of realised risks" does not make sense. We assume that the definition of "risk" should read "In the context of climate change, risks can arise from climatic impact drivers as well as"? Please clarify and see also our comments on the Entire Report regarding the definitions of risk/impact and CID. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97073	0				Please define the reference periods used in this report. For continuity's sake, in AR6 the same reference periods should be used as in AR5, or at least referred to. For climate, please refer to the WMO document http://www.wmo.int/pages/prog/wcp/ccl/guide/documents/Nor mals-Guide-to-Climate-190116_en.pdf, and please see https://library.wmo.int/doc_num.php?explnum_id=4166, P 11, Ch 2, paragraph 3, last sentence "the period from 1961 to 1990 has been retained as a standard reference period for long-term climate change assessments." This means 1850-1900 = pre- industrial; 1961-1990 as a stable base for long-term climate change and variability assessment. The minimum length should be 30years. Please see also our comment on the definition of "climate" in the Glossary 8-41 and our comment on _Reference periods on the entire report. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
105627	0				Include acronyms in the Glossary [Julian Levy, United States of America]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
15007	0				Is it worth to include the definition of sublimation? [Juan Rivera, Argentina]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
38391	0				The term 'snow cover' is inconsistently expressed in chapters of WGI contribution. The title of 2.3.2.2 in Chapter 2 is Terrestrial snow cover, that of 9.5 in Chapter 9 is seasonal snow cover and that of 9.5.3 is snow. It is suggested to define the concept of snow cover in the glossary and harmonize the normative use of this term in WGI contribution. [Yaming LIU, China]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
66449	0	0			I would suggest creating appropriate references to Subterms as well, simillar to "Subterm See Term." For example, one wants to learn what Atlantic Meridional Overturning Circulation (AMOC) is. So one goes to page 5 of the Glossary (i.e. where AMOS should be placed) but there is no such term. So one gives up, not knowing that AMOC is explained at page 30, under Meridional overturning circulation (MOC) term. [Barbara Barzycka, Poland]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
87309	0	0	0	0	Please add definitions of natural, managed and human systems in the Glossary [Marcel Berk, Netherlands]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
86881	0	0	0	0	Please consider to include TCR in the glossary and not only the TCRE [Oyvind Christophersen, Norway]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97083	10	24	10	25	"climate projection": explanation might be misleading since climate predictions depend both on the initial conditions AND on the emission/concentration/radiative forcing scenario. Please revise. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
9681	10	46	11	4	Given that AR6 has shifted from assessing GMST to GSAT, should this not apply to these quantities as well? It would only make things official because GSAT (rather than GMST) has been used historically by modellers. Regarding ECS, is the Charney definition used (ie excluding ESM feedbacks) or not? [Olivier Boucher, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97085	10	52	10	54	This entry equals the first part of the corresponding entry in the glossary of SROCC, however leaving out the information on how ECS is obtained. Since ECS is a key issue, please include an explanation on how ECS values used in AR6 are obtained. The SROCC-glossary states: "Often estimated through experiments in atmosphere-ocean general circulation models (AOGCMs) where CO2 levels are either quadrupled or doubled from pre-industrial levels and which are integrated for 100–200 years. A related quantity, the climate feedback parameter (unit: W m–2 °C–1) refers to the top of atmosphere budget change per degree of globally averaged near-surface temperature change." In case this description is no longer accurate for AR6, please modify accordingly. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
32267	11	24	11	25	This is outdated. Please replace by "for example NDCs under the Paris Agreement". [Eric Brun, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88553	11	36	11	37	Why does the definition of decadal variability not also point to Atlantic Multidecadal Variability (AMV)? [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
115209	11	42	11	46	to better integrate the biosphere in WGI. I suggest to write this: "A climate feedback involving changes in the properties of the land and ocean carbon cycle in response to climate change. In the ocean, changes in oceanic temperature and circulation can affect the atmosphere-ocean CO2 flux; on the continents, climate change can affect the primary production by plants and the soil respiration and hence the exchange of CO2 between the atmosphere and the land biosphere. See also Biospheric feedbacks." Fortunately you have already added the newly needed glossary terms 'Primary Production (PP)', and 'Net Primary Production (NPP)' to complement the set of needed terms that were missing in AR5 (had only GPP). Make in above suggested text those terms of course italic. However, the term 'Carbon-concentration feedback' is not contained in the glossary and was AFAIK never introduced in previouos IPCC glossaries. I find it not particularly helpful. Instead I propose to use newly the term 'Biospheric feedbacks', a term that is also used regularly in the literature (e.g. Thornton, P. E., Calvin, K., Jones, A. D., Di Vittorio, A. V., Bond-Lamberty, B., Chini, L., Shi, X., Mao, J., Collins, W. D., Edmonds, J., Thomson, A., Truesdale, J., Craig, A., Branstetter, M. L., & Hurtt, G., 2017. Biospheric feedback effects in a synchronously coupled model of human and Earth systems. Nat. Clim. Chang., 7(7): 496-+. https://doi.org/10.1038/NCLIMATE3310 or Woodwell, G.M. & Mackenzie, F.T. (eds.), 1995. Biospheric feedbacks in the global	
97087	11	48	11	51	This entry uses a comparative language ("broader", "more value- neutral") without stating what it is comparing to. It does not provide a clear definition of the term "climatic impact driver". Since this is a new concept used throughout the report, please provide a comprehensive definition. Please see also our comment on change this expression to "climate driver". [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
115277	11	48	11	51	characterisation of climatic changes that may potentially be	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					This is not a definition and it does not exclude several	As per standard IPCC procedure, the glossary was not part of the
					possibilities for CIDs that are not considered by the list of CIDs	SOD review, so no response to this comment is provided here.
					(floods, air pollution etc.) in Chapter 12. Under this glossary	The comment has, however, been considered.
					definition, for example, the PDV is a CID, and a volcanic eruption	
					is a CID, since they both characterise climatic changes that may	
					be relevant for potential impacts (irrespective of whether they	
					are positive or negative). I have made an extended version of	
					this comment in the Chapter 12 review.	
					I suggest a much more careful definition is needed. This is only a suggestion:	
					Climatic impact drivers are aspects of the physical climate system	
I					that drive impacts in various socioeconomic sectors at the global	
88555	11	48	11	51	or regional scale. Such climatic impact drivers can be negative	
					(formerly known as climate hazards, such as increased flooding,	
					leading to infrastructure damage) or beneficial (such as reduced	
					occurrence of frosts, leading to increased agricultural yield).	
					In fact, a simpler definition may be to define CIDs in terms of	
					climate hazards, which are mostly well understood. E.g.,	
					"Climatic impact driver. A broader definition of climate hazard	
					to also include changes that might be beneficial." What ever	
					definition is chosen, I suggest it is vital to include one positive	
					and one negative example to illustrate to the reader the type of	
					event that is envisaged, in order to avoid ambiguity. [Andrew	
					Turner, United Kingdom (of Great Britain and Northern Ireland)]	
1						

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
Comment ID	From Page	from Line	To Page	14	Comment There are a few definitions of climate services that the international community are using, but this isn't one of them as far as I am aware. At the end of this paragraph the WMO's Global Framework for Climate Services (GFCS) seems to be cited (WMO, 2019), although it isn't a proper reference. Can I suggest two things here: 1) the GFCS is published in a Nature Climate Change article, which also provides a commonly and widely used definition of climate services which has been discussed and agreed through an extensive international UN process (a mini-IPCC-type process) as part of the GFCS implementation plan, and is the definition used in Chapter 10. So can we replace the WMO (2019) citation with Hewitt, C. D., S. Mason and D. Walland, 2012: The global framework for climate services, Nature Climate Change, 2, 831- 832, doi:10.1038/nclimate1745 2) rather than create another definition of climate services, in lines 6-8 use the definition agreed under the GFCS and documented in Hewitt et al and Chapter 10 "Climate services: The provision of climate information in such a way as to assist decision-making. The service needs to be based on scientifically credible information and expertise, have an effective access mechanism and meet the users' needs (Hewitt et al., 2012). Climate services include the synthesis of context-relevant climate information addressing a wide range of time scales that go beyond operational weather services. From this point of view,	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
14997	12	32	12	34	climate services are an instrument for the production of climate information in a co-production process that is inclusive, This is related to cold days/cold nights but applies for all the definitions of extremes: Box 2.4 corresponds to AR5, I think this needs to be clarified in the text. [Juan Rivera, Argentina]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
131597	12	34	12	34	This box is not be present in Glossary. Does this refer to a box in chapter 2, which I cannot find? Double check and delete statement if necessary [Hans Poertner and WGII TSU, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108361	12	50	12	52	Unclear, could these lines be re-worked. I had trouble understanding what was being said. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
131599	12	55	12	55	Make sure the definition applies beyond (previous) special reports [Hans Poertner and WGII TSU, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
21217	13	17	13	18		As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
38393	13	38	13	40	Cryosphere is defined as "The components of the Earth System at and below the land and ocean surface that are frozen, including snow cover, glaciers, ice sheets, ice shelves, icebergs, sea ice, lake ice, river ice, permafrost and seasonally frozen ground". It is suggested to change 'Earth System' to 'Climate System' to be more scientific. [Yaming LIU, China]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
83405	13	53	13	54	Dansgaard-Oeschger events and the associated cold/warm oscillations occur in a glacial climate background. The correct terminology for the cold phase is stadial and the warm phase interstadial. So the glossary text should read as: "nearby North Atlantic by a cold stadial state, followed by a rapid transition to a warmer interstadial phase, and a slow cooling back to stadial conditions." [Antje H. L. Voelker, Portugal]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97089	14	11	14	14	"decadal predictability/prediction": please, add "10 years" because "decadal time scale" could also refer to 10 days. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97091	14	25	14	29	Please include reference to SRCCL as done in corresponding glossary entry in SROCC: "Note: For a discussion of the term forest and related terms such as afforestation, reforestation and deforestation, see the IPCC Special Report on Land Use, Land-Use Change, and Forestry (IPCC, 2000). In the context" [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here.
108363	14	25	14	29	The note in the entry on forrest is different from the entry on deforestation. Please resolve this inconsistency. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
5761	14	25	14	29	Please do not use or refer to any definitions from the Kyoto- Protocol context. First, for in the Greenhouse Gas Inventory Guidance, the 2019 Refinement to the 2006 GL had, for political reasons, to replicate content from the work you cite here. Second, the definitions from the very narrow KP context are not in line with definitions used in the forest-related sciences and management and thus lack coherence with the application of this term in the "real world", outside of the narrow field of GHG Inventory and reporting. So please use a definition for "deforestation" in line with definitions from e.g. FAO (as already used in other IPCC products, e.g. taken from the FAO FRA (http://www.fao.org/3/a-am665e.pdf)), or compiled by forest experts (https://efi.int/sites/default/files/files/publication- bank/2018/ir_06.pdf)). Suggestion: at least delete the text "Note: Protocol.". [Joachim Rock, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97093	14	37	14	42	In AR5 there was a difference in the definition of D&A between WGI and WGII. Please clarify here in the glossary if this is still the case of not. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
88557	14	37	14	42	This new D&A definition seems general enough to encompass the wider meaning of climate change and that the change could be attributed to internal variability. This seems a sensible approach. However, while the first and third sentences include the possibility that the the detected change in a given phenomenon could be attributed to some internal/decadal forcing (e.g. a multi- decadal change in a monsoon being attributed to a phase change of the IPO), the middle sentence excludes this since it infers the overcoming of internal variability. Perhaps the second sentence could be removed, or clarified, e.g. by moving it to the end and stating that an established method for attributing a change to an external forcing relies on that change having <10% chance of happening due to internal forcing. [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
21219	14	44	14	44	please add unicellular photosynthetic here too [Robert Speijer, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
7501	14	44	14	45	The term Diatoms is included in the Glossary as "Silt-sized algae that live in surface waters of lakes, rivers and oceans and form shells of opal. Their species distribution in ocean cores is often related to past sea surface temperatures." In the same way that these microfossils are useful in paleoclimate science, so they are other microfossils as Foraminifera that are nor included in this Glossary. In fact, Foraminifera are mentioned in the captions of Figure 2.28 (Chapter 2, page 73, lines 22, 26), and they are included in Figure 2.3 (Chapter 2, page 156) whereas Diatoms are not mentioned at all in this Chapter 2. I suggest the inclusion of the term Foraminifera in this Glossary, and they are mentioned in this AR6 and they could be defined as: Foraminifera Single-celled, sand-sized marine organisms (protists) that possess a hard test mainly composed of agglutinated walls (detrital grains glued together with organic cement) or calcium carbonate (predominantly calcite). They are used to reconstruct a range of (paleo)environmental variables such as salinity, temperature, oxygenation, oxygen isotope composition, and organic and nutrient flux. [Alejandro Cearreta, Spain]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
83475	14	45	14	45	This sentence needs to be modified to "On regional scales, their species distribution in ocean cores can be related to past sea surface temperatures." In the global ocean, marine diatom species distribution is driven by nutrients/nutrient availability = primary productivity. The relationship with temperature is only secondary/indirect and works mainly if regionally restricted such as around Antarctica. So the wording in line 45 needs to be toned down. As potential reference you could look at Abrantes F., and Gil I.M. (2013) Marine Diatoms. In: Elias S.A. (ed.) The Encyclopedia of Quaternary Science, vol. 2, pp. 816-824. Amsterdam: Elsevier [Antje H. L. Voelker, Portugal]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108365	14	53	14	54	Need a line break. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
32269	14	54	14	54	It could be worth introducing the concept of DACCS (Direct Air Capture with Carbon Storage). Rationale : the name DAC only refers to the capture phase, but gives no indication on what is done with the carbon captured. The topology for CCS/CCU does that and it is helpful. E.g. existing DAC systems use carbon (in greenhouses) instead of storing them. In this case, DAC cannot be considered as a CDR technology. [Eric Brun, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88559	15	12			Currently there is no definition of distillation, which may be needed. [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97095	15	23	15	23	"downscaling": please, correct "(up to 50 km)"; 100 km is in the range of the global models. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
106067	15	23	15	31	The parenthetical statement "(up to 100 km)" should be eliminated. There should not be an explicit limit on what constitutes "regional scale" as discussed in {10.1}. More specifically, considering that a model's grid probably resolves circulation only as fine as 3-4 grid points, a GCM with even 100- km grid spacing is almost certainly not resolving circulation with 100 km scale. [William Gutowski, United States of America]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
106069	15	23	15		"The dynamical method can use the output of" (add "can" to distinguish between high-resolutiong GCMs usef for downscaling and those high-resolution GCMs that are not downscaling coarser GCMs but running a full-fledged global climate simulation with interactive ocean, atmosphere, cryosphere, biosphere, etc. [William Gutowski, United States of America]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response						
					suggest to add hydrological drought and agricultural drought in	As per standard IPCC procedure, the glossary was not part of the						
					the glossary as key terms referring reader to the drought	SOD review, so no response to this comment is provided here.						
131601	15	43	15	50	defintion - hydrological drought is used in the SPM [Hans	The comment has, however, been considered.						
					Poertner							
					and WGII TSU, Germany]							
					What is a key organism? What does that term mean? [Jason	As per standard IPCC procedure, the glossary was not part of the						
108367	16	23	16	23	Donev, Canada]	SOD review, so no response to this comment is provided here.						
						The comment has, however, been considered.						
					Ecosystem services is mentioned, but not present in WGI	As per standard IPCC procedure, the glossary was not part of the						
131603	16	24	16	24	Glossary [Hans Poertner	SOD review, so no response to this comment is provided here.						
					and WGII TSU, Germany]	The comment has, however, been considered.						
					Ecosystem services isn't an entry, but it's referred to, and is	As per standard IPCC procedure, the glossary was not part of the						
108369	16	24	16	24	unclear. [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.						
						The comment has, however, been considered.						
					Unclear, could these lines be re-worked. I had trouble	As per standard IPCC procedure, the glossary was not part of the						
108371	16	33	16	34	understanding what was being said. [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.						
100071	10	00	10	0.		The comment has, however, been considered.						
					Maybe a link to the Annex VI, section AVI.4.1? [Juan Rivera,	As per standard IPCC procedure, the glossary was not part of the						
14999	16	42	16	42	Argentina]	SOD review, so no response to this comment is provided here.						
14555	10	72	10	42	Algentinaj	The comment has, however, been considered.						
					Perhaps also add EECO, Eocene (like Pliocene) and Paleo records	As per standard IPCC procedure, the glossary was not part of the						
21211	16	6	16	6	to the Glossary [Robert Speijer, Belgium]	SOD review, so no response to this comment is provided here.						
21211	10	0	10	0	to the clossery [hobert sperjer, beightin]	The comment has, however, been considered.						
							Consider adding "peat" to the list. [Eric Brun, France]	As per standard IPCC procedure, the glossary was not part of the				
32271	17	20	20	20	20	20	20	20	17	20	consider adding pear to the list. [Life brun, france]	SOD review, so no response to this comment is provided here.
52271	17	20	17	20		The comment has, however, been considered.						
					This should say 'wavelength, frequency or energy range' since	As per standard IPCC procedure, the glossary was not part of the						
108373	17	6	17	6	there are times when the literature refers to all three. [Jason	SOD review, so no response to this comment is provided here.						
100373	1/	Ũ	17	Ū	Donev, Canada]	The comment has, however, been considered.						
					The entry "emergence (of the climate signal)" is missing,	As per standard IPCC procedure, the glossary was not part of the						
97097	17	8			although being referenced on page AG-49, line 17. Please include							
57057	1/	0			such an entry. [Nicole Wilke, Germany]	The comment has, however, been considered.						
					The definition of emergent constraint does not need to be	As per standard IPCC procedure, the glossary was not part of the						
					specific to ESMs. Some papers on emergent constraints use bog-	SOD review, so no response to this comment is provided here.						
					standard coupled OA GCMs of CMIP, or mixtures of OAGCMs and							
88561	17	9	17	11	ESMs. Suggest generalise by changing ESM to GCM. [Andrew	The comment has, nowever, been considered.						
					Turner, United Kingdom (of Great Britain and Northern Ireland)]							
					i umer, omteu kinguom (or oreat britain anu korthem freidhu)							
					"degree" of evidence is an odd phrase. Perhaps "evaluation" of	As per standard IPCC procedure, the glossary was not part of the						
90997	18	43	18	45	evidence? [Wendy Parker, United Kingdom (of Great Britain and	SOD review, so no response to this comment is provided here.						
50557	10	75	10		Northern Ireland)]	The comment has, however, been considered.						
					Several places refer to definitions of adaptation, but there is no	As per standard IPCC procedure, the glossary was not part of the						
5797	2		2		definition of adaptation. [Jesse Reynolds, United States of	SOD review, so no response to this comment is provided here.						
5151	2		4		Americal	The comment has, however, been considered.						
					I think it might be good to rename these terms so the	As per standard IPCC procedure, the glossary was not part of the						
108345	2	1	2	15								
106545	Z	Т	2	12	alphabetical order makes more sense [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.						
						The comment has, however, been considered.						

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
44963	2	1	2	18	Why is model listed first and the rest are alphabetical? I realize models are one of the most important things for the reader to understand. If that is the case, however, he language is confusing. Simplifyng that language and adding examples of other areas of science that use models would help: weather predictions, pandemic tracking, etc. [Catherine Linsky, United States of America]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97075	2	1	2	9	"(model) ensemble": identical to "model ensemble" on p. 31? [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
20913	2	1	52	44	Suggested additions Attribution Baseline Climate impact driver Emerging evidence Exposure Hazard Impact Indicator [philippe waldteufel, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
20915	2	1	52	44	Suggested additions (followed) Industrial Era Internal climate variability Line of evidence Natural climate variability Reference period Vulnerability [philippe waldteufel, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108347	2	21	2	22	Abrupt climate change refers to a regional to global scale' this is worded in a way that's confusing. Please consider revising this so it's more clear. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88149	2	31			The definition of added value needs to include that the improvement has to be based on physical reasons. Otherwise, e.g., cancelling errors could also be misinterpreted as added value. [Douglas Maraun, Austria]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
106065	2	31	2	33	Added value should rest on a physical-process foundation. Suggested wording: "Improvement of the representation of some climatic aspects by one methodology compared to another methodology, based on better representation of key physical processes. For example, downscaling a coarse resolution global climate model (GCM) by a regional climate model (RCM) may improve the representation of physical processes governing regional climate in complex terrain." [William Gutowski, United States of America]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108349	2	32	2	32	downscaling a course resolution' This is unclear could it be re- worded [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
9587	2	49	2	49	properties of clouds [Olivier Boucher, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
9589	2	55	3	1	This definition for AOD is not very accurate. In particular it does not make it clear that AOD is usually meant to be the vertical AOD. It is much better to define it as the vertical integral of the aerosol extinction coefficient. [Olivier Boucher, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
69277	2	55	3	1	The footnote 7 for Aerosol optical depth (AOD) in B.1.4 would seem to fit better in the Glossary to supplement the current information. The explanation for AOD may need to be rephrased, as the current statement may be difficult to understand at first glance for policymakers. [Kaoru Magosaki, Japan]	SOD review, so no response to this comment is provided here.
97099	20	18	20	22	Please include reference to SRCCL as done in corresponding glossary entry in SROCC: "Note: For a discussion of the term forest and related terms such as afforestation, reforestation and deforestation, see the IPCC Special Report on Land Use, Land-Use Change, and Forestry (IPCC, 2000). In the context of National GHG inventories, see the 2006 IPCC Guidelines for National GHG Inventories and information provided by the United Nations Framework Convention on Climate Change (UNFCCC, 2019). See also Afforestation, Deforestation and Reforestation." [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108375	20	18	20	22	The entry on afforestation and deforestation is different, please resolve this inconsistency. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
5763	20	20	18	22	The 2006 GL are not given under the address you provide for "UNFCCC 2019". Please use a direct reference (e.g., based on https://www.ipcc-nggip.iges.or.jp/public/2006gl/) [Joachim Rock, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
5765	20	24	20	26	Please do not use or refer to any definitions from the Kyoto- Protocol context. First, for in the Greenhouse Gas Inventory Guidance, the 2019 Refinement to the 2006 GL had, for political reasons, to replicate content from the work you cite here. Second, the definitions from the very narrow KP context are not in line with definitions used in the forest-related sciences and management and thus lack coherence with the application of this term in the "real world", outside of the narrow field of GHG Inventory and reporting. Here, the definition taken from Dec. 16/CMP.1 includes the term "sustainable". Ideally, forest management IS sustainable, but this is not the requirement for forests under management. If this definition is applied here, any change in GHG net emissions related to unsustainable management would have to be captured under deforestation or forest degradation. This latter term is not considered in this report at all. So please use a definition for "forest management" in line with definitions from e.g. FAO (as already used in other IPCC products, e.g. taken from the FAO FRA (http://www.fao.org/3/a-am665e.pdf)), or compiled by forest experts (https://efi.int/sites/default/files/files/publication- bank/2018/ir_06.pdf)). Suggestion: at least delete the term "sustainable". And please check: the source "UNFCCC 2002" is not given in the references. [Joachim Rock, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
32273	20	48	20	48	We support this approach. [Eric Brun, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
5799	20	48	20	59	It is indeed best to consider SRM and CDR separately and to avoid the word "geoengineering" [Jesse Reynolds, United States of America]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
93565	21	21	16	16	Is there a word missing? It sounds like the definition should be for Glacial period or glaciation. [Miriam Jackson, Norway]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88563	21	29			Perhaps the antonym, glacerized, also be listed here to define a surface that is currently covered by glacier ice. [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108377	21	3	21	5	Unclear, could these lines be re-worked. I had trouble understanding what was being said. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
93871	21	39	21	45	Rock glaciers must have and independent entry in the glossary. Rock glaciers are not a type of glaciers. Sorry for the intuitiveness, but ones in while the scientific worlds mix up the things a little bit. Rock glaciers have been involved in a conundrum for almost four decades (which is unnecessary to mention here). Nevertheless, in recent times, with the acknowledgment of the relevance of rock glaciers and mountain permafrost changes to the mountain environment, we are starting to achieve more consensus on what we call rock glaciers. They are periglacial or permafrost system/landform, so it is scientifically wrong to include it as a type of glaciers. Although both glaciers and rock glaciers are perennial ice masses, the former is the result of the accumulation of snow; meanwhile, the later is related to the thermal state of the ground. So, please use an independent entry for rock glaciers to no give the wrong impression that rock glaciers develop from the accumulation of snow. [Lucas Ruiz, Argentina]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
71199	21	39	39	45	A rock glacier is not a special form of a glacier, but a periglacial landform as such it deserves its own category and it should not be listed as a special case of a glacier. This is a general confusion made many times unfortunately. Even the WGMS acknowledges that this is a mistake in their numbering / classification system. Please see Barsch (1996), IPA-RG (2020). [Lukas Arenson, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108379	21	42	21	42	The term talus is too technical for the glossary and should be defined, even if only parenthetically here. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
71201	21	45			A qualitative statement such as "which can play a significant role in the hydrological regime" must not be used in a definition of a term. Also, it must be mentioned that this is not clear and there is a significant lack in research (e.g., Dugay et al., 2015). Schaffer et al. (2019) state that "There is insufficient knowledge available to adequately quantify the hydrological contribution of rock glaciers to streamflow within the SA." These major uncertainties are mainly related to latent heat, which is often ignored (see Comment Nr. 29) but essential in these processes. References: Duguay, M. A., Edmunds, A., Arenson, L. U., & Wainstein, P. A. (2015). Quantifying the significance of the hydrological contribution of a rock glacier – A review. In GEOQuébec 2015. 68th Canadian Geotechnical Conference, 7th Canadian Permafrost Conference (p. CD-Rom). Quebec-City, Quebec, Canada. Schaffer, N., MacDonell, S., Réveillet, M., Yáñez, E., & Valois, R. (2019). Rock glaciers as a water resource in a changing climate in the semiarid Chilean Andes. Regional Environmental Change, 19(5), 1263–1279. https://doi.org/10.1007/s10113-018-01459-3, [Lukas Arenson, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108381	21	47	21	48	Solar radiation management should be mentioned here. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97101	21	55			Please change to "and sea surface temperature (SST) over of ice- free ocean regions" in order to clearly state the difference to GSAT (water temperature instead of near-surface air temperature). [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97103	22	37	22	43	Please include information on which GHGs are covered under the Kyoto Protocol (this information had been given in the glossaries of SR1.5 and SRCCL, but not in SROCC) [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
87289	22	5	22	10	We recommend to use the UNFCCC definion of GST: According to UNFCCC the Global Stock Take is defined as the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement periodically assesses the collective progress towards achieving the purpose of this Agreement and its long-term goals, including under Article 2, paragraph 1(a–c), in the areas of mitigation, adaptation and means of implementation and support. The outcome of the global stocktake informs parties in updating and enhancing their Nationally Determined Contributions (NDCs), as well as in enhancing international cooperation for climate action. The first global stocktake is planned for 2023 and will recur every five years after that. [Marcel Berk, Netherlands]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
32283	22	5	22		While this is globally correct, the definition of the Global Stocktake could reflect more accurately the wording of the Paris Agreement. The GST is defined in Article 14 of the Paris Agreement as to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals. These long-term goals are defined in Article 2.1 a-c of the Agreement (related to the temperature increase, ability to adapt, and making financial flows consistent with low-emission, resilient	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
103957	22	5	22	6	development). [Eric Brun, France] This definition of the Global Stocktake should reflect the wording of the Paris Agreement more carefully. The GST is defined in Article 14 of the Paris Agreement as to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals. These long-term goals are defined in Article 2.1 a-c of the Agreement (related to the temperature increase, ability to adapt, and making financial flows consistent with low- emission, resilient development). [Philippe Tulkens, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
32275	22	8	22	8	Please replace "updated" by "communicated" (art 4.9 of the PA) - update has an other meaning and different implications. [Eric Brun, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108383	23	12	23	12	Halogenated organic species needs to be defined here. This is a glossary, definitions shouldn't revolve around technical terms. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88565	23	24	23	26		As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108385	23	47	23			As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
97105	24	7	24	14	Please state complete sentences, making clear what the information is relating to: "It encompasses the mid-Holocene (MH), the 1000-year-long interval centered at 6000 years before 1950 which. Hhas been a period of long-standing focus for climate modelling, with enhanced seasonality in the Northern Hemisphere and decreased seasonality in the Southern Hemisphere (Otto-Bliesner et al., 2017). Also encompasses part of the Holocene is the Holocene thermal maximum (HTM), a millennial-scale interval that occurred at different times between around 10,000 to 5000 years ago when regional temperatures reached their maximum. The Holocene further Also encompasses the post-glacial interval, which began approximately 8000 years ago when the fundamental features of the modern climate system were essentially in place, as the influence of remnant Pleistocene ice sheets waned." [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97107	25	34	25	40	We note that the definition of "impacts" did not change when compared to the SR15. This might be inconsistent with the potentially new definition of "risk". Please check. Please clarify and see also our comments on the Entire Report regarding the definitions of risk/impact and CID. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
131605	26	19	26	19	Not necessary to include page number in the reference [Hans Poertner and WGII TSU, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108387	26	24	26	24	Institutional capacity' isn't an entry in the glossary and should be. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
103959	27	23	27	24	The Doha Amendment has still not received sufficient ratifications for entry into force. The date can therefore be updated. [Philippe Tulkens, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
131607	27	34	27	34	Please highlight these cases in the report, where applicable [Hans Poertner and WGII TSU, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
5767	27	55	28	3	Please delete "Agriculture, Forestry and other land use (AFOLU)" or add a paragraph on this to the Glossary. As is, thisterm is not included herein. [Joachim Rock, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108389	29	25	29	25	Greenhouse gas removal (GGR) is listed as an entry in the glossary, but isn't in the glossary [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97109	29	28			Please include definition of "low-likelihood, high impact events" as in Box SPM.1. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
83397	29	51	29	51	Chapter 1.3.2 p. 35 15-16 cites the Past Interglacial Working Group of PAGES (2016) who demonstrated that during the last 800 000 years only a small part of the odd-numbered Marine Isotope Stage corresponds to the interglacial interval. In the glossary entry for Interglacial or interglaciation (p. 26 line 35) this is correctly applied by linking the LIG with MIS 5e. So the glossary entry for odd- numbered Marine Isotope Stages needs to be corrected and should say "and odd-numbered MISs include interglacials." [Antje H. L. Voelker, Portugal] due to the rapidity and ubiquity of rapid adjustments' of what?	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered. As per standard IPCC procedure, the glossary was not part of the
108351	3	26	3	27	This wasn't clear to me. [Jason Donev, Canada]	SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97077	3	46	3	51	Please include reference to SRCCL as done in corresponding glossary entry in SROCC: "Note: For a discussion of the term forest and related terms such as afforestation, reforestation and deforestation, see the IPCC Special Report on Land Use, Land-Use Change, and Forestry (IPCC, 2000). In the context" [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here.
5759	3	46	3	51	Please do not use or refer to any definitions from the Kyoto- Protocol context. First, for in the Greenhouse Gas Inventory Guidance, the 2019 Refinement to the 2006 GL had, for political reasons, to replicate content from the work you cite here. Second, the definitions from the very narrow KP context are not in line with definitions used in the forest-related sciences and management and thus lack coherence with the application of this term in the "real world", outside of the narrow field of GHG Inventory and reporting. So please use a definition for "afforestation" in line with definitions from e.g. FAO (as already used in other IPCC products, e.g. taken from the FAO FRA (http://www.fao.org/3/a-am665e.pdf)), or compiled by forest experts (https://efi.int/sites/default/files/files/publication- bank/2018/ir_06.pdf)). Suggestion: at least delete the text "Note: Protocol". [Joachim Rock, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97079	3	46	40	29	Please choose a uniform formulation of references to reporting under the Kyoto Protocol for "Forest", "Afforestation", "Deforestation" and "Reforestation". [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
21221	31	24	31	27	Mineralisation also includes the biogenic formation of shells and thus seems to be a broader term than indicated here. [Robert Speijer, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88567	31	41	31	43	The wording here seems to place a value judgement against initial condition ensembles, "only characterise") whereas they much more fully characterise internal variabilty than MME. Suggest deleting "only". [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response										
					The definition of monsoon inlcudes a definition of the North	As per standard IPCC procedure, the glossary was not part of the										
15001	32	25	32	36	American monsoon. Do we need this definition? If the answer is	SOD review, so no response to this comment is provided here.										
15001	32	25	32	30	positive, all the monsoons (African, East Asian, etc.) should to be	The comment has, however, been considered.										
					defined. [Juan Rivera, Argentina]											
					It is not clear why there is a distinct, very detailed definition for	As per standard IPCC procedure, the glossary was not part of the										
88569	32	29	32	36	the North American monsoon at the exclusion of the other	SOD review, so no response to this comment is provided here.										
88269	32	29	32	30	monsoons. [Andrew Turner, United Kingdom (of Great Britain	The comment has, however, been considered.										
					and Northern Ireland)]											
					Greenhouse gas removal (GGR) is listed as an entry in the	As per standard IPCC procedure, the glossary was not part of the										
108391	33	10	33	10	glossary, but isn't in the glossary [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.										
						The comment has, however, been considered.										
					suggested to split into three seperate entries, then referencing	As per standard IPCC procedure, the glossary was not part of the										
424.000	22	-	22	6	the another (i.e. "long-term" referencing "near-term" and "mid-	SOD review, so no response to this comment is provided here.										
131609	33	5	33	6	term") [Hans Poertner	The comment has, however, been considered.										
					and WGII TSU, Germany]											
					Not necessary to include page number in the reference [Hans	As per standard IPCC procedure, the glossary was not part of the										
131611	34	3	34	3	Poertner	SOD review, so no response to this comment is provided here.										
										and WGII TSU, Germany]	The comment has, however, been considered.					
					Should be listed as a subset of PDV, listed immediately below?	As per standard IPCC procedure, the glossary was not part of the										
88571	35	10	35	13	[Andrew Turner, United Kingdom (of Great Britain and Northern	SOD review, so no response to this comment is provided here.										
					Ireland)]	The comment has, however, been considered.										
										IPO is defined in line 21, I suggest to move up the definition.	As per standard IPCC procedure, the glossary was not part of the					
15003	35	12	35	12	[Juan Rivera, Argentina]	SOD review, so no response to this comment is provided here.										
						The comment has, however, been considered.										
															The North Pacific Index (NPI) was not considered for the	As per standard IPCC procedure, the glossary was not part of the
15005	35	20	35	22	assessment in AR6. I suggest to refer to the Annex VI instead of	SOD review, so no response to this comment is provided here.										
					the Box 2.5 from the AR5. [Juan Rivera, Argentina]	The comment has, however, been considered.										
					Röhl et al. (2007) estimated the duration of the PETM (~170 kyr)	As per standard IPCC procedure, the glossary was not part of the										
					but used an age around 55 Ma, when K/T-B was still anchored at	SOD review, so no response to this comment is provided here.										
21209	35	29	35	29	65 Ma. When K/T-B was redated at 66 Ma, the base of PETM was	The comment has, however, been considered.										
21209	35	29	30	29	redated at 55.9 Ma. See discussion on p.897 in the Paleogene											
					chapter by Vandenberghe et al. (2012) in The Geological											
					Timescale 2012. [Robert Speijer, Belgium]											
					The correct language is "the PA was adopted under the UNFCCC	As per standard IPCC procedure, the glossary was not part of the										
32277	35	39	35	39	on Dec 15". [Eric Brun, France]	SOD review, so no response to this comment is provided here.										
						The comment has, however, been considered.										
					Please add, after "climate change": "and to make financial flows	As per standard IPCC procedure, the glossary was not part of the										
32279	35	47	35	47	consistent with low GHG emission and climate resilient	SOD review, so no response to this comment is provided here.										
32279	30	47	30	47	development pathways" (art 2.1.c of the PA, as important as the	The comment has, however, been considered.										
					other PA long term goals). [Eric Brun, France]											
					Considering that the report will be published later than 2020, the	As per standard IPCC procedure, the glossary was not part of the										
131613	35	47	35	47	wording here may be updated, like " was inteded to become"	SOD review, so no response to this comment is provided here.										
121012	33	47	33	47	or "has become fully" [Hans Poertner	The comment has, however, been considered.										
					and WGII TSU, Germany]											
					What is the basis for stating that the "Paris Agreement will	As per standard IPCC procedure, the glossary was not part of the										
103961	35	47	35	48	become fully effective in 2020"? The Agreement has already	SOD review, so no response to this comment is provided here.										
					entered into force. [Philippe Tulkens, Belgium]	The comment has, however, been considered.										

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
97111	35	50	38	8	Thank you very much for providing this very useful definition of pathways versus scenarios. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97113	36	8			"In the IPCC Special Report" - in which one? [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
131615	36	8	36	8	WHICH special report? SR15? [Hans Poertner and WGII TSU, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
71203	37	17			change the text to: "Permafrost is defined via temperature and time, rather than" [Lukas Arenson, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88461	37	20	37	24	"Near- surface" is really just an adjective and this is not really a precise term and the depth should always be specified when the term is used. The 2nd sentence is not quite correct. How long it takes for a temperature change to propagate to greater depths depends on the thermal properties and temperature changes will progress very quickly in bedrock with a high quartz content for example and a negligible or no ice content. In fact when temperatures are close to the freezing point the latent heat effects associated with ice-rich material will slow down the propagation of the temperature change. The key thing here is that it simply takes time for a temperature change to propagate downwards to greater depths whether the ground is frozen or not. It does not however mean that these changes are not important for a variety of reasons. [Sharon Smith, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
71205	37	22			how is "ice-rich" defined? Not in the glossary. The authors may consult CAN/BNQ 2501-500/2017: Geotechnical Site Investigations for Building Foundations in Permafrost Zones, which is a Canadian Standard and this document gives definitions about ice-rich etc. [Lukas Arenson, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88453	37	26	37	26		As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88455	37	30	37	32	Whether temperature changes are subdued will depend on ice content. Latent heat could be specifically mentioned. Revision is suggested: " fluctuations may be subdued due to latent heat requirements for melting ground ice." [Sharon Smith, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
131617	37	34	37	36	pH is only defined through H+ concentration in dilute solutions (e.g. seawater). In more general terms, it is defined through the activity of H+ ions. I think this distinction should be included in the Glossaries across the WG [Hans Poertner and WGII TSU, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
131619	37	44	37	46	Suggested to add the key defining feature of plankton (as opposed to nekton): Its horizonal distribution/migration is determined by water currents [Hans Poertner and WGII TSU, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
21213	37	44	37	46	Plankton involves not only microorganisms, but also large floating organisms unable to swim against the current, such as jellyfish. Zooplankton feeds on all kinds of plankton, including phytoplankton, other zooplankton, bacterioplankton, etc. [Robert Speijer, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
21223	37	48	37	55	An epoch is part of a period (geochronology) and a series is part of a system (chronostratigraphy), so better use Quaternary Period to be in line with epoch. The boundary between Pliocene and Pleistocene is at 2.58 Ma, not 2.59 Ma. [Robert Speijer, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
7505	37	8			In the definition of the term Peat "Soft, porous or compressed, sedentary deposit of which a" it should be written as "Soft, porous or compressed, sedimentary deposit of which a" [Alejandro Cearreta, Spain]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97115	37	8	37		The explanation of the term "Peat" should include its main properties as an organic substrate, which is especially the high carbon content. The effects of aeration of peat substrates and it's consequent important position in the carbon cycle should be included (see e.g. the WRB: FAO 2014: World reference base for soil resources). [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97117	37	8	37	9	The term "Peatland" could be integrated in the Glossary to give an explanation for this type of ecosystem, which's function in the carbon cycle may be not known by every reader. Its degradation and the effects could be explained in analogy to the explanation of the term "Permafrost degradation". [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108393	38	28	38	29	Need a line break. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108395	39	19	39	19	l think you mean 'latest' rather than 'latter'. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
7503	39	19	39	20	The following geological periods of time are included in the Glossary: -Cenozoic (page 8) as an Era -Holocene (page 24) as an Epoch -Pleistocene (page 37) as an Epoch -Pliocene (page 37-38) as an Epoch of the Neogene Period. The definition mentions also the Quaternary Period in line 53 -Quaternary (page 39, lines 19-20). Defined as a System as follows: "The Quaternary System is the latter of three systems that make up the Cenozoic Era (65 Ma to present), extending from 2.59 Ma to the present, and includes the Pleistocene and Holocene epochs." Earth history, as formalized in the International Chronostratigraphic Chart, has a dual hierarchy of time units. One, known as the geochronological time scale, is simply of time itself; for instance, using this, one speaks of the Quaternary Period, or the Holocene Epoch, or the Cenozoic Era. The second, parallel scale is of chronostratigraphy; the equivalent unit here is the Quaternary System, or the Holocene Series, or the Cenozoic Erathem, which comprises all of the strata deposited during the Quaternary Period, the Holocene Epoch, or the Cenozoic Era respectively. Thus, in consideration of the Quaternary, one may speak of its history within the Quaternary Period, and also of its material record represented within the deposits of a Quaternary System. Because in all the previous cases included in this Glossary only the geochronological time scale has been used to define these periods of time, I suggest to do so in the case of the Quaternary.	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
21225	39	19	39	20	66 Ma [Robert Speijer, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
86883	39	30	39	38		As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
9591	4	12	4	13	This definition is incomplete. The "airborne fraction" is the fraction of CO2 emissions emitted **in a year** that is left in the atmosphere at the end of the year (or a year after?). It is a strange concept because in reality it is all past emissions that contribute to the oceanic and terrestrial sinks in a year, not just the emissions of the previous year. Hence this concept depends on whether emissions are increasing or decreasing. These caveats should be stated here to put a final stop to the bad usage of this concept. I would even go as far as to recommend IPCC not to use it. [Olivier Boucher, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
14993	4	32	4	39	The glosary should refer to the Annex VI: Modes of variability, in particular sections AVI.2 and AVI.3 for the annular modes. Box 2.5 seems to be pointing towards AR5. [Juan Rivera, Argentina]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108353	4	39	4	39	This is refering to annualar modes in the definition of annualar modes. Could this be redone? [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
7485	4	43			Consequently, I suggest also the inclusion of the term Anthropocene in this Glossary. It could be defined as (taken literally from the Glossary of IPCC SR1.5, pages 4-5): Anthropocene The 'Anthropocene' is a proposed new geological epoch resulting from significant human-driven changes to the structure and functioning of the Earth System, including the climate system. Originally proposed in the Earth System science community in 2000, the proposed new epoch is undergoing a formalization process within the geological community based on the stratigraphic evidence that human activities have changed the Earth System to the extent of forming geological deposits with a signature that is distinct from those of the Holocene, and which will remain in the geological record. Both the stratigraphic and Earth System approaches to defining the Anthropocene consider the mid-20th century to be the most appropriate starting date, although others have been proposed and continue to be discussed. The Anthropocene concept has been taken up by a diversity of disciplines and the public to denote the substantive influence humans have had on the state, dynamics and future of the Earth System. [Alejandro Cearreta, Spain]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108355	4	47	4	49	Unclear, could these lines be re-worked. I had trouble understanding what was being said. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97119	40	24	40	29	Please include reference to SRCCL as done in corresponding glossary entry in SROCC: "Note: For a discussion of the term forest and related terms such as afforestation, reforestation and deforestation, see the IPCC Special Report on Land Use, Land-Use Change, and Forestry (IPCC, 2000). In the context" [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					This definition is not in line with the definitions(s) used in forest-	As per standard IPCC procedure, the glossary was not part of the
					related sciences and forest management. The establishment of	SOD review, so no response to this comment is provided here.
					forests requiring a chnage in land use (not only land cover)	The comment has, however, been considered.
					usually is considered as "afforestation." As above: Please do not	
					use or refer to any definitions from the Kyoto-Protocol context.	
					First, for in the Greenhouse Gas Inventory Guidance, the 2019	
					Refinement to the 2006 GL had, for political reasons, to replicate	
					content from the work you cite here. Second, the definitions	
					from the very narrow KP context are not in line with definitions	
5769	40	24	40	29	used in the forest-related sciences and management and thus	
					lack coherence with the application of this term in the "real	
					world", outside of the narrow field of GHG Inventory and	
					reporting. Please use a definiition for "reforestation" in line with	
					definitions from e.g. FAO (as already used in other IPCC products,	
					e.g. taken from the FAO FRA (http://www.fao.org/3/a-	
					am665e.pdf)), or compiled by forest experts	
					(https://efi.int/sites/default/files/files/publication-	
					bank/2018/ir_06.pdf)). [Joachim Rock, Germany]	
					Suggest adding "context", i.e., "taking into account the context	As per standard IPCC procedure, the glossary was not part of the
					and values of both the producer and user." following {10.5.2.1}.	SOD review, so no response to this comment is provided here.
106071	40	40	40	42	Then perhaps, {10.1.3}, which only mentions values needs to be	The comment has, however, been considered.
					adjusted to align with {10.5.2.1]. [William Gutowski, United	
					States of America]	
					Unclear, could these lines be re-worked. I had trouble	As per standard IPCC procedure, the glossary was not part of the
108397	40	40	40	42	understanding what was being said. [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					"resolution": the definition provided rather refers to "grid	As per standard IPCC procedure, the glossary was not part of the
97121	41	17	41	17	width". The resolution is usually coarser than the grid width.	SOD review, so no response to this comment is provided here.
97121	41	17	41	17	Please add this information to the glossary. [Nicole Wilke,	The comment has, however, been considered.
					Germany]	
					Response to what exactly? That's not clear from the way that this	As per standard IPCC procedure, the glossary was not part of the
108399	41	24	41	32	has been written. [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					"from the start of 2018" is limited to SR15 and should be revised.	As per standard IPCC procedure, the glossary was not part of the
15401	41	4	41	7	[Junichi Tsutsui, Japan]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
15873	41	43	41	43	About the definition of risk, I propose the following definition in order to complete the proposed definition. This definition will be publish in September 2020 in the following book (Garbolino E. and Voiron-Canicio C., Ecosystem and Territorial Resilience, A Geoprospective Approach. Elsevier, ISBN: 9780128182154) : "risk thus results from the interaction between: • One or more dangerous phenomena, called hazards, characterized by their probability of occurrence, their intensity, their kinetics of hatching and evolution and their spatial extent. • One or more exposures (human lives, goods, infrastructure, ecosystems, etc.) characterized by their vulnerability, their resilience and their spatial influence. " [Emmanuel Garbolino, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
97123	41	43	42	4	The text of the definition of "risk" has changed when compared to the SR1.5 glossary. Please clarify, if there are also changes to the concept compared to the AR5 and to recent Special Reports. Please explain potential consequences of these changes. Please clarify and see also our comments on the Entire Report regarding the definitions of risk/impact and CID. [Nicole Wilke, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108401	42	28	42	28	What's the difference between 'scenarios' and 'pathways'? That's not clear. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108403	42	39	42	39	What's meant by 'counterfactual constructions' here? Could this be wrtten differently? [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108405	42	47	42	55	Please explain a little more how concentration scenarios are different from emissions scenarios. There's a difference, but it doesn't come out in these definitions. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
12187	43	27	43	27	The definition for sea ice is not completely correct. Specifically, the definition for first-year ice is not accurate. Change "Sea ice less than one year old is called first-year ice." to "Sea ice that has not experienced a summer melt is called first-year ice." The definition for perennial ice, second-year ice, and multiyear ice are fine. [Thomas Lavergne, Norway]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108407	43	28	43	30	Ice floes, pack ice, first year ice and perrenial ice should all have their own sub-entries in Sea ice. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
12189	43	37	43	37	The definition for sea ice concentration can be improved: "Sea ice concentration is the fraction of the ocean covered by sea ice." [Thomas Lavergne, Norway]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108409	44	17	44	18	Number mistake I think? [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					Sea surface salinity is mentioned but not found in the Glossary	As per standard IPCC procedure, the glossary was not part of the
131621	44	28	44	29	[Hans Poertner	SOD review, so no response to this comment is provided here.
					and WGII TSU, Germany]	The comment has, however, been considered.
					Sea Surface Salinity (SSS) needs an entry. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the
108411	44	28	44	29		SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					I don't think it is useful to contrast SLCFs with WMGHGs since	As per standard IPCC procedure, the glossary was not part of the
					some gases can be both (as described for methane, but also	SOD review, so no response to this comment is provided here.
					some HCFCs and HFCs). It would be better to differentiate purely	The comment has, however, been considered.
					on the timescale for climate effects rather than on mixing. It	
					would be useful if a precise timescale could be specifiec (for	
16657	44	44	44	51		
10057	44	44	44	51	instance this would help separate the Kigali gases). Or if not	
					explictly say a precise timescale can't be defined but should be	
					considered roughly half the timescale of policy interest (when we	
					get to within 20 years of peak warming methane becomes a	
					LLGHG). [William Collins, United Kingdom (of Great Britain and	
					Northern Ireland)]	
					Definition of SRM - it is defined here as a modification of the	As per standard IPCC procedure, the glossary was not part of the
					earth's shortwave radiation budget, however, throughout the	SOD review, so no response to this comment is provided here.
51935	46	6	46	10	report, it is sometimes described as covering longwave radiation	The comment has, however, been considered.
21322	40	0	40	10	too (e.g. cirrus cloud thinning). See comments on ch4 and ch5.	
					[Jolene Cook, United Kingdom (of Great Britain and Northern	
					Ireland)]	
					Consider defining SRM as having the aim of reducing *climate	As per standard IPCC procedure, the glossary was not part of the
					change*, as SRM could generally bring changes in precipitation,	SOD review, so no response to this comment is provided here.
5801	46	7	46	7	extreme T and P, and tropical cyclone intensity closer to pre-	The comment has, however, been considered.
	-		-		industrial levels albeit imperfectly as well. [Jesse Reynolds,	
					United States of America]	
					This definition is somewhat contradicted by the inclusion of	As per standard IPCC procedure, the glossary was not part of the
5803	46	7	46	7	cirrus cloud thinning in SRM, at Ch 4 p. 81, lines 22-27. [Jesse	SOD review, so no response to this comment is provided here.
5005	40	,	40	,	Reynolds, United States of America]	The comment has, however, been considered.
					This definition needs revision and should be adjusted to the	As per standard IPCC procedure, the glossary was not part of the
					updated Chapter 1 text. It should include a more WG1 targeted	SOD review, so no response to this comment is provided here.
					definition beyond the generic one, should go beyond the	The comment has, however, been considered.
					description of events, and should clarify that storylines are a	
					means of representing uncertainties. For the WG1 specific	
					aspect, the following could be a starting point: In WGI, physical	
88469	47	7			climate storylines are self-consistent and plausible unfoldings of	
					a physical trajectory of the climate system, or a weather or	
					climate event, on timescales from hours to multiple decades.	
					They are embedded into the risk landscape, conditioned on	
					specified explanatory elements, and intended as a means of	
					representing different types of uncertainties. [Douglas Maraun,	
					Austria]	
						As per standard IPCC procedure, the glossary was not part of the
					,	,
108413	47	7	47	12	distinguishing those is important to understand how the terms	SOD review, so no response to this comment is provided here.
					They are embedded into the risk landscape, conditioned on specified explanatory elements, and intended as a means of representing different types of uncertainties. [Douglas Maraun,	As per standard IPCC procedure, the glossary was not pa

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
108415	48	17	48	19	Perhaps some surprises could involve global warming as well. Focusing on cooling could be taken out of context and used against the primary purpose of this document: to talk about the dangers of global warming. This implies that a surprise will plausably stop global warming (which isn't intended). [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
55415	48	21	48	21	Taliks do not occur only as layers. The Harris (1988 - NRC glossary) definition is that a talik is a "layer" or "body". Suggest including body in the defintiion. [Nancy Hamzawi, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88457	48	21	48	21	Consider using definition from IPA glossary (ref in earlier comment): A layer or body of unfrozen ground occurring in a permafrost area due to a local anomaly in thermal, hydrological, hydrogeological, or hydrochemical conditions [Sharon Smith, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88573	48	23	48	25	I would disagree with the first part. The statistical association is a necessary but not sufficient condition - it merely indicates that a teleconnection might exist. For it to do so, there must be some physical mechanism (such as the examples given) linking behaviour in the spatial locations. [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88459	49	1	49	2	Consider using newer definition from IPA Glossary (ref in earlier comment): The process by which characteristic landforms result from the thawing of ice-rich permafrost or the melting of massive ice. Additional information that could be added: Landforms found in thermokarst terrain include, thermokarst lakes, thermokarst mounds and alasses (a large depression of the ground surface produced by thawing of a largearea of very thick and exceedingly ice-rich permafrost) [Sharon Smith, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88575	49	10	49	13	Note there is also a somewhat analogous terminology of Tiers 1- 3 within CMIP and the CMIP6-endorsed MIPs, Tier-1 being the compulsory experiments and Tiers 2 & 3 being optional, more complex experiments. [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108417	49	17	49	17	Emergence of the climate signal doesn't have an entry in the glossary [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
9593	49	21	49	26	I like this definition for tipping points, which is clearer and more relevant than the original definition. It would be useful though to say if drivers are meant to be GHG concentrations or warming level, or both depending on the context (i.e. whether SRM is considered or not). [Olivier Boucher, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
9595	49	32	49	32	l would say 1368 Wm-2 is more than the generally accepted value (at least recently) which is around 1362 Wm-2. [Olivier Boucher, France]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
5771	49	55	50	3	Please revise text. Not all woody plants show tree rings and these are ractions to seasonality in growth, which can also be drought-induced and e.g. semi-annual, not annual. The text as it is now describes "year rings" in most temperate tree species, but could be misread to describe a general feature of all woody plants. [Joachim Rock, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88547	5	43			Suggest inserting "Attribution See Detection and Attribution" [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
70589	51	14		17	To me the definitions of 'Surprises' and 'Unknown unknowns' are overlapping. In particular, the example given here of an 'unknown unknown' of a biological epidemic is given as an example of a surprise in Section 1.4.5. If the authors of the report cannot clearly distinguish these terms, this seems to me to be an indication that these two definitions should be merged into one. Also, I am not convinced that we should elevate a Donald Rumsfeld quote into an IPCC Glossary definition term. [Gillett Nathan, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
5773	51	14	51	17	Please revise this text. A bark beetle infestation is not an "unknown unknown". Bark beetle infestations have been documented since medieval times and the biology and gradation of the species concerned here are well known. Given the knowledge we have and had, the spread of this beetle (and related species) is no surprise. The paper you cite here (which is not included in the references) already proves that this is not an "unknown unknown". [Joachim Rock, Germany]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
108419	51	46	51	50	These terms need their own entries in the glossary ROGs, NMVOCs. [Jason Donev, Canada]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
106777	52	7			The definition of Walker Circulation is associated to the Pacific Ocean, while in Chapter 8 the terms "Pacific Walker circulation" and "Indian Walker circulation" are used. This suggests a more general definition of the Walker circulation. [Wilfried Pokam, Cameroon]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
21215	6	1	6	1	The Cenozoic is the last/youngest (the 10th) era of the geological time scale. It is only the third era when 90% of the time scale (=Precambrian) is disrecarded. [Robert Speijer, Belgium]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
88549	6	24			Currently there is no definition for bias adjustmnent, which may be needed [Andrew Turner, United Kingdom (of Great Britain and Northern Ireland)]	As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.
131595	6	36	6	38		As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
					Unclear, could these lines be re-worked. I had trouble	As per standard IPCC procedure, the glossary was not part of the
108357	6	52	6	55	understanding what was being said. [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Please replace "products" by "long-lived products". [Eric Brun,	As per standard IPCC procedure, the glossary was not part of the
32265	7	42	7	42	France]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					Greenhouse gas removal (GGR) is listed as an entry in the	As per standard IPCC procedure, the glossary was not part of the
108359	7	45	7	45	glossary, but isn't in the glossary [Jason Donev, Canada]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					In the same way, Cenozoic era should be written as Cenozoic Era	
7493	8	1			[Alejandro Cearreta, Spain]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
					The definition of "climate" refers to the WMO-definition of 30-	As per standard IPCC procedure, the glossary was not part of the
					years as the "classical period". Does this mean the IPCC has	SOD review, so no response to this comment is provided here.
97081	8	41	8	4/	distanced itself from 30 years climatology for climate change	The comment has, however, been considered.
					analysis? This assumption is supported by the fact that this	
					report often uses periods of 20 or even 10 years. Please explain	
					and revise. [Nicole Wilke, Germany]	
					It is important that the current definition has been broadened to	As per standard IPCC procedure, the glossary was not part of the
			-		include natural and internal variability, which are important	SOD review, so no response to this comment is provided here.
88551	8	46	8	50	components of understanding climate signals at the regional	The comment has, however, been considered.
					scale. No change needed. [Andrew Turner, United Kingdom (of	
					Great Britain and Northern Ireland)]	
22200	0	20	0		Biophycisl feedback is very important. It will be helpful to include	
23289	9	30	9	35	an explaination for this term. [Zhenzhong Zeng, China]	SOD review, so no response to this comment is provided here.
						The comment has, however, been considered.
		- 4			Definitions of observational indices can be found in the Annex VI.	
14995	9	51	9	51	Box 2.5 seems to be pointing towards AR5. [Juan Rivera,	SOD review, so no response to this comment is provided here.
					Argentina]	The comment has, however, been considered.

Comment ID	From Page	From Line	To Page	To Line	Comment	Response
7903	AG7	53	7	53		As per standard IPCC procedure, the glossary was not part of the SOD review, so no response to this comment is provided here. The comment has, however, been considered.