	"Top Level" Information				
Date	**Reviewer's Name**	**Reviewer's Institution**	**Component**	**Comment**	**ES-DOC Response *(include the date, the responder's name and, the new version number if implementing any changes)***
Pre -stage 3	Alistair Sellar	UK Met Office Hadley Centre	toplevel - coupling	It is not clear where to include information on coupling between model components. Some of this is potentially scientifically relevant to data users. For example, in HadGEM3 the sea-ice surface exchange calculations are carried out within the atmosphere not in the sea-ice model. We could put this information in the sea-ice component or atmosphere component or toplevel, but we think it's important that there is consistency between models, so would appreciate a recommendation. Myself and the one other person who expressed an opinion felt that it would be betterto have the coupling information in the toplevel to avoid duplication and inconsitency.	We have added a CIM property and class to store couplings (https://github.com/ES-DOC/esdoc-cim-v2-schema/blob/master/science_classes.py#L30). These will, in general, not be specialized, but will be collected separately (e.g. notebook, spreadsheet) and injected into CIM documents by ES-DOC. That said, some coupling questions, in particular those that involve more than two realms, will be asked in the toplevel key_properties. (0.5.0) David Hassell
Pre -stage 3	Alistair Sellar	UK Met Office Hadley Centre	toplevel - tuning	We felt that the tuning section was broadly very good, and avoided potential pitfalls, such as asking which parameters were tuned (which we couldn't answer because that's not (always) how we do it). Some suggestions: 1. it would be good if there was somewhere to reference a paper which describes the model's tuning methodogy in more detail. The WCRP tuning workshop in 2014 and Hourdin (2016) paper recommended that model description papers describe tuning more explicitly, so these should be useful sources of more information.	Each realm process can have a have any number of citations attached to it. David Hassell
Pre -stage 3	Alistair Sellar	UK Met Office Hadley Centre	toplevel - tuning	2. Could you change "metric" to "metric/diagnostic" in the "description" text? A metric is a single scalar value, but much of our tuning is more subjective, e.g. comparing patterns of diagnostics. In a similar spirit, global_mean_metrics_used should be global_metrics_used, because metrics of variability are just as valid as global means.	Fixed (0.5.0) David Hassell
Pre -stage 3	Alistair Sellar	UK Met Office Hadley Centre	toplevel - tuning	3. Can you be more exlpicit about energy_balance and fresh_water_balance. Presumably the former is abuot the tuning to achieve radiative balance at TOA. But is the water question sounds more like it should be in the conservation section, unless I'm missing it's meaning. What aspect of the water cycle might be tuned?	The tuning section is more about how nalance was achieved, and the conservation section is more about the properties of the balance (or lack there of). The question descriptions have been updated to reflect this better (0.5.0) David Hassell
Pre -stage 3	Øyvind Seland	MET Norway	top-level-technical	Have you given thought on how to present two model versions used for CMIP but with small technical differences, e.g. resolution and tuning.Related problem. Will it be possible to copy / link in documentation that are identical for the model versions?	This is most certainly possible. Before describing a model, we ask how you would like to initialize its documents, for each realm (toplevel, ocean, atmosphere, etc.) there is a choice of A) create from scratch; B) initialize to the answers from a particular CMIP5 model; and C) initialize from a particular CMIP6 model. Once initialized, and minor edits can be made prior to publishing the final document. David Hassell

Pre -stage 3	Øyvind Seland	MET-Norway	top-level aerosol-provision	One aerosol type may have several categories of sources. Should that be included as an additional category by the user. Or category "mixed" and then give more information below E.g for organics we use M+E	You can select multiple entries from the list of forcing provisions, so this is already catered for. I have updated the description to make this clear to someone entering data. (0.5.0) David Hassell
Review phase 3	David Neubauer	ETH Zürich	Toplevel - Radiative forci	Cloud albedo effect and Cloud lifetime effect are called RFaci and ERFaci in AR5. The AR5 terminology could be added in the description.	Done. (0.5.0) David Hassell