	Realm: Sea Ice				
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	Chevallier	CNRM	SeaIce	There is no section on "seaice_atmosphere_exchanges" to document flux parameterization or coupling with the atmosphere (coupler? implicit/explicit? single flux over ocean-sea ice or double flux?).	All realm-to-realm coupling will be dealt with a new "realm_coupling" component the top level. (RP: 2017-10-02)
Pre-stage 3	Chevallier	CNRM	SeaIce	Same for the seaice_ocean_exchanges (though it is partially covered by "cmip6.seaice.thermodynamics.energy.basal_heat_flux").	All realm-to-realm coupling will be dealt with a new "realm_coupling" component the top level. (RP: 2017-10-02)
Pre-stage 3	Salas y Mélia	CNRM	SeaIce	Sea ice enthalpy should be in the list of prognostic	Added as prognositic variable (RP 28/06/2017)
Pre-stage 3	François Massonnet	UCL	sea ice	Discretisation > Vertical > Layering. Please specify whether you refer to snow or ice layers. I assume that "Two-layers" means one of ice plus one of snow?	Clairified (RP 21/11/2017)
Pre-stage 3	François Massonnet	UCL	sea ice	Sea Ice Categories > Other: In the Description, you can give the example of models that paramterise the ITD (they don't have an explicit ITD but assume a certain distribution, and fluxes are computed accordingly)	Included (RP 21/11/2017)
Pre-stage 3	François Massonnet	UCL	sea ice	Redistribution: Description: add "... can redistribute sea ice thickness", not "sea ice" only	Clairified (RP 21/11/2017)
Pre-stage 3	François Massonnet	UCL	sea ice	Rheology: "Aniostropic" --> "Anisotropic"	Corrected (RP 21/11/2017)
Pre-stage 3	François Massonnet	UCL	sea ice	A section is missing on whether the model has an explicit or parameterised floe size distribution, and whether it is independent or coupled to the ITD	Included (RP 23/11/2017)
Pre-stage 3	François Massonnet	UCL	sea ice	The Energy > Heat content of precipitation section makes me think that we should also know if precipitation that falls on sea ice affects eventually the ocean surface salinity.	Included (RP 23/11/2017)
Pre-stage 3	François Massonnet	UCL	sea ice	Sections describing standard parameter values (snow density, P*, bare ice albedo; drag coefficients) would be very welcome	Included (RP 4/12/2017)
2017-11-23	Mark Elkington	MOHC	sea ice	In our models a few of the sea-ice variables (fluxes mostly) are reported on the atmosphere grid, while the remainder are reported on the ocean grid. When responding to the grid properties for the seaice specialisation how would you like us to deal with the fact we have two grids. My assumption is that we would report the ocean grid and then use the description section to indicate that some variables are reported on the atmosphere grid.	Your assumption is correct please use the description section to list what fluxes are reported on the atmosphere or ocean grid (RP: 2017-11-23)

2017-11-23	Mark Elkington	MOHC	sea ice	What is expected in KEY PROPERTIES / subprocess [Conservation] / Property [Budget: For each conserved property, specify the output variables which close the related budgets [str 1.1]]. In the previous question they have selected “Energy”, “Mass” and “Salt” as the conserved properties. This property is now asking them to provide a list of all output variables which close the related budgets. They have two problems. 1) Some of the conserved properties have a long list of output variables used to close budgets 2) Its not clear how to format this information in a single string field Could you provide some guidance on how they should respond please – an example would be great. I note that there are other questions like this in other specialisations so your response will likely be relevant to all of these.	A note has been updated to state that (where possible) the terms that close the budgets should be specified as a comma separated list of variables. (RP 2017-12-04)
2018-03-14	Mark Elkington	MOHC	Sea Ice	I have just downloaded what I assume is v1.0.0 of the sea ice specialisation. On line 1245 we have a subprocess in Key Properties called Key Parameter Values. The first property an enum which is labelled "Typical Parameters" with a description of "what values were specified for the following parameters". The enum only lists the parameters (e.g. ice strength, snow conductivity etc.) - it doesn't allow a user to provide a VALUE for those parameters. Should the enum values be simply be a list of separate properties. Also in the following property "Additional parameters" the question asks for a comma separated list - would it be useful to clarify the format as something like "parameter: value, parameter: value, etc.".	Resolved as suggested
2018-03-16	Mark Elkington	MOHC	Key Properties	In Key Properties called Key Parameter Values: The first property is an enum which is labelled "Typical Parameters" with a description of "what values were specified for the following parameters". The enum only lists the parameters (e.g. ice strength, snow conductivity etc.) - it doesn't allow a user to provide a VALUE for those parameters. Should the enum values be simply a list of separate properties, or is there some other way this property is supposed to be interpreted.	same issue as above RP 2018-03-16
2018-05-30	Mark Elkington	MOHC	seaice	cmip6.seaice.thermodynamics.energy.fixed_salinity_value - this property type is defined as a "float", but requests a value for each sea ice layer a return of 1.078, 2.345, 3.456, 4,567 which is what is required is not a float. Will the import parsing handle multiple float values or should this be set to some string type with an indication that multiple floating poijt values need to be provided.	The schema needs mofiication to allow this, ES-DOC team are working on this. RP
2018-11-14	Martin Vancoppenolle	IPSL		2.3.1 - Overview of properties of seawater relevant to sea ice in seaice model => The question is too vague, cannot answer.	To be removed by ES-DOC team (RP 29-11-2018)
2018-11-14	Martin Vancoppenolle	IPSL		2.4.4 - Number of horizontal gridpoints => Shall the continental mask be applied?	I believe it should be counted, the land sea mask is basically an ancillary file. The output will likely have the mask in there even though it is NaN, however in an aqua planet experiement they would not be.

2018-11-14	Martin Vancoppenolle	IPSL		2.5.1 - Overview & 2.5.2 - Description => Unclear difference between what is requested for "overview" vs "description".	To be removed by ES-DOC team (RP 29-11-2018)
2018-11-14	Martin Vancoppenolle	IPSL		2.7.1 - Overview & 2.7.2 - Description => Unclear difference between what is requested for "overview" vs "description".	To be removed by ES-DOC team (RP 29-11-2018)
2018-11-14	Martin Vancoppenolle	IPSL		2.7.3 - On diagnostic variables and 2.7.4 - Missing processes => Items 2.7.3 and 2.7.4 should be grouped. Separation is meaningless or too ambiguous.	Although as you suggest these are similar keeping them separate allows for a distinction between simply variables and processes that may be useful for some (RP 2018-11-30)
2018-11-14	Martin Vancoppenolle	IPSL		2.8.6 - Corrected conserved prognostic variables => Question unclear.	Corrected (RP 2018-11-30)
2018-11-14	Martin Vancoppenolle	IPSL		3.3.3 - Scheme => I think the question is ill-posed. I would ask: what is the horizontal discretization method?	Corrected (RP 2018-11-30)
2018-11-14	Martin Vancoppenolle	IPSL		3.5.5 - Ice thickness distribution scheme => The question is very ambiguous, what is an ice thickness distribution scheme? How does that question differ from 3.5.1?	The term scheme has been removed to be clearer, this answer should be more detailed than the earlier one and is displayed as part of the model summary. (RP 2018-11-30)
2018-11-14	Martin Vancoppenolle	IPSL		4.1.2 - Overview => I don't see the point here of repeating what is being said elswhere.	Removed by ES-DOC team (RP 29-11-2018)
2018-11-14	Martin Vancoppenolle	IPSL		5.3.4 - Ice lateral melting => It is sad that there is no option for no lateral melting.	Amended (RP 2018-11-30)
2018-11-14	Martin Vancoppenolle	IPSL		5.5.1 - Salinity type => The question should be rephrased.	Unchanged. RP 2018-11-16
2018-11-14	Martin Vancoppenolle	IPSL		6.1.4 - Ice radiation transmission => The list of answers seems bizarre.	These were based on suggestions by yourself and agreed to by Alexandra Jahn. RP 2018-11-30