API Changes

Method name	Old value (860)	New value (870)	Marked backward compatible in 860	Interface (860)	Interface (870)	Rationale for change	Impact
Added Optional Arguments							
ESMF_Initialize	N/A	hconfig	Yes	16.4.1	16.4.1	Supports direct access to the default HConfig object if such object was created during ESMF_Initialize().	No impact.
ESMF_GridCompCreate	N/A	hconfig	Yes	17.4.4	17.4.4	Allows the specifiation of a HConfig object.	No impact.
ESMF_GridCompGet	N/A	hconfig	Yes	17.4.7	17.4.7	Supports access to the HConfig object kept by the component.	No impact.
ESMF_GridCompGet	N/A	hconfigIsPresent	Yes	17.4.7	17.4.7	Supports query whether an HConfig object is kept by the component.	No impact.
ESMF_GridCompSet	N/A	hconfig	Yes	17.4.16	17.4.16	Allows the specifiation of a HConfig object.	No impact.
ESMF_CplCompCreate	N/A	hconfig	Yes	18.4.4	18.4.4	Allows the specifiation of a HConfig object.	No impact.
ESMF_CplCompGet	N/A	hconfig	Yes	18.4.7	18.4.7	Supports access to the HConfig object kept by the component.	No impact.
ESMF_CplCompGet	N/A	hconfigIsPresent	Yes	18.4.7	18.4.7	Supports query whether an HConfig object is kept by the component.	No impact.
ESMF_CplCompSet	N/A	hconfig	Yes	18.4.16	18.4.16	Allows the specifiation of a HConfig object.	No impact.
ESMF_GridCreateCubedSphere	N/A	coordCalcFlag	No	31.6.27	31.6.27	Allows user to select new calculation method for cubed sphere coordinates. The new method is less memory intensive. The old method is still the default.	No impact.
ESMF_GridCreateCubedSphere	N/A	coordCalcFlag	No	31.6.28	31.6.28	Allows user to select new calculation method for cubed sphere coordinates. The new method is less memory intensive. The old method is still the default.	No impact.
ESMF_ClockCreate	N/A	repeatDuration	Yes	45.5.5	45.5.5	Make the clock a **repeat** clock that repeatedly goes through the same interval.	No impact.
ESMF_ClockGet	N/A	repeatDuration	Yes	45.5.8	45.5.8	Get the repeatDuration from a clock.	No impact.
ESMF_ClockGet	N/A	repeatCount	Yes	45.5.9	45.5.9	Get the number of times a repeat clock has gone back to the beginning of its interval.	No impact.
Added Methods							
ESMF_StateLog	N/A	N/A	No	N/A	21.7.12	Supports writing information about State into the ESMF log.	No impact.
ESMF_FieldLog	N/A	N/A	No	N/A	26.6.61	Supports writing information about Field into the ESMF log.	No impact.
ESMF_ArrayBundleLog	N/A	N/A	No	N/A	27.5.15	Supports writing information about ArrayBundle into the ESMF log.	No impact.
ESMF_ArrayLog	N/A	N/A	No	N/A	28.5.26	Supports writing information about Array into the ESMF log.	No impact.
ESMF_DistGridLog	N/A	N/A	No	N/A	36.6.19	Supports writing information about DistGrid into the ESMF log.	No impact.
ESMF_TimeIntervalSet	N/A	N/A	No	N/A	44.4.26	Allow the user to set a time interval using an ISO 8601 time string.	No impact.
ESMF_TimeIntervalSet	N/A	N/A	No	N/A	44.4.27	Allow the user to set a time interval using an ISO 8601 time string and a calendar.	No impact.
ESMF_TimeIntervalSet	N/A	N/A	No	N/A	44.4.28	Allow the user to set a time interval using an ISO 8601 time string and a calendar kind.	No impact.
ESMF_TimeIntervalSet	N/A	N/A	No	N/A	44.4.29	Allow the user to set a time interval using an ISO 8601 time string and a start time.	No impact.
ESMF_HConfigOperator(=)	N/A	N/A	No	N/A	48.6.1	Allows assignment of HConfig objects.	No impact.
ESMF_HConfigLog	N/A	N/A	No	N/A	48.6.43	Supports writing information about HConfig into the ESMF log.	No impact.
ESMF_HConfigMatch	N/A	N/A	No	N/A	48.6.44	Supports more complex comparison between two HConfig objects than provided by the (==) operator.	No impact.
Deprecated Classes, Methods, Arguments	To be removed in 9.0.0						
Deprecated Classes							
deprecated since 8.1.0:							

ESMF_Attribute	N/A	N/A	No	55	55	The underlying implementation for metadata storage has changed and is available through the native ESMF_Info API.	Code that uses the legacy ESMF_Attribute API through derived type, methods, or named constants should migrate to use the ESMF_Info class API.
Deprecated Methods							
deprecated since 5.3.1:							
ESMF_StateRemove	N/A	N/A	yes	21.7.15	21.7.15	A different overload of the method exists that is more consisent with the overall API.	Code that uses the scalar version of ESMF_StateRemove() should change to the list version.
Deprecated Arguments							
deprecated since 8.6.0:							
ESMF_VMGet	accDeviceCount	accDeviceCount	yes	51.6.19	51.6.19	Arguments that reflect ESMF's accelerator support strategy better have become available in the general ESMF_VMGet() method (51.6.18).	Code that uses the "accDeviceCount" argument should be changed to using the alternative arguments from 51.6.18.
deprecated since 8.5.0:							
ESMF_ConfigLoadFile	delayout	delayout	yes	46.3.15	47.3.16	This argument was never used internally, and it is unclear what the original intention was.	Code that currently passes the "delayout" argument into ESMF_ConfigLoadFile should be changed to not pass this argument.
deprecated since 8.1.0:							
ESMF_FieldBundleSMM	zeroregion	zeroregion	yes	25.5.33	25.5.33	Replaced with zeroregionflag for consistency.	Code that uses the "zeroregion" argument should be changed to using the "zeroregionflag" argument.
ESMF_FieldRegridStore	weights, indices	weights, indices	yes	26.6.60	26.6.67	Replaced with factorList and factorIndexList for consistency.	Code that uses the "weights" argument should be changed to using the "factorList" argument. Code that uses the "idices" argument should be changed to using the "factorIndexList" argument.
ESMF_ArrayBundleSMM	zeroregion	zeroregion	yes	27.5.23	27.5.23	Replaced with zeroregionflag for consistency.	Code that uses the "zeroregion" argument should be changed to using the "zeroregionflag" argument.
deprecated since 5.2.0rp1:							
ESMF_ArrayGet	localDeList	localDeList	yes	28.5.18	28.5.18	Replaced with localDeToDeMap for consistency.	Code that uses the "localDeList" argument should be changed to using the "localDeToDeMap" argument.