Variables	Frequency	Aggregation	EUP_MPI2	EUP_MPI3	SNCX_MPI	Available at SYSTEMS (national feedback)	Available at CFS_v2 (reference)	Available at SPICE	Comments
Air temperature	At 7am, 2pm and 9pm (local time)	point	FET			Yes, [Mangil 2]	Yes, [Mangil Inquiry]	Yes, [Mangil Vel]	
Air temperature	Daily	mean		GSS, HI, Hyl, HDD, UDC	AQUATICS, B-HYPE, COMS, LPJ4A, JULES, GUESS, MORDOR, ICS	VORTEX, EMBA	Yes, (mean2D4)	Yes, (Hyl2M)	Yes, [Sei]	
Air temperature	Daily	minimum		T<-17°C, CI	COMS, GUESS, GLAM, AQUATICS, B-HYPE, MORDOR	ULBEDS	Yes, (min2D1)	Yes, (Imin)	Yes, [Seimin]	
Air temperature	Daily	maximum		HI, FWI	COMS, GUESS, GLAM, AQUATICS, B-HYPE, MORDOR	ULBEDS, EMBA	Yes, (max2D4)	Yes, (Imax)	Yes, (seimax)	
Air temperature	Monthly	mean			ICS		Yes, (mean2D4)	Yes, (Hyl2M)	Yes, [Sei]	
Precipitation	Daily	mean	EUP, Hyl		AQUATICS, B-HYPE, COMS, LPJ4A, JULES, GUESS, GLAM, MORDOR, ICS	ULBEDS, ICS	Yes, [Ip]	Yes, (pmiale)	Yes, [pr]	
Precipitation	Monthly				ICS		Yes, [Ip]	Yes, (pmiale)	Yes, [pr]	
Surface downwelling shortwave flux in air	Daily	mean			COMS, LPJ4A, JULES, GLAM, MORDOR	ULBEDS, EMBA, ICS	Yes, [rsds]	Yes, (iswdfc)	Yes, [rsds]	
Surface downwelling longwave flux in air	Daily	mean			COMS, LPJ4A, JULES		Yes, [rsld]	Yes, (ilwdfc)	Yes, [rlds]	
Wind speed (at 10m)	Daily	mean	FWI		COMS, JULES, AQUATICS, B-HYPE	VORTEX, EMBA	Yes, (Derived 10u, 10v)	Yes, (wmoiscurrent, currents)	Yes, (Derived sab, sev)	
Wind speed (at 10m)	Daily	maximum			GUESS		Yes, (Derived 10u, 10v)	Yes, (wmoiscurrent, currents)	Yes, (Derived sab, sev)	
Wind speed (at 10m)	Monthly	mean	CFU				Yes, (Derived 10u, 10v)	Yes, (wmoiscurrent, currents)	Yes, (Derived sab, sev)	
Geopotential 850mb	Daily	mean				VORTEX, EMBA	Yes, (z850)	Yes, (Derived z850)	No. (proxy: monthly: sg850)	
U-component 850mb Wind speed	Daily	mean				VORTEX	Yes, (u850)	Yes, (wind850)	No. (Proxy: monthly: u850)	
V-component 850mb Wind speed	Daily	mean				VORTEX	Yes, (v850)	Yes, (wind850)	No. (Proxy: monthly: v850)	
U-component 925mb wind speed	Daily	mean				VORTEX	Yes, (u925)	Yes, (wind925)	No.	
V-component 925mb wind speed	Daily	mean				VORTEX	Yes, (v925)	Yes, (wind925)	No.	
Geopotential height at 700hPa	Daily	At 12 UTC			MORDOR		Yes, (Derived z700)	Yes, (gpm700)	No.	
Geopotential height at 1000hPa	Daily	At 12 UTC			MORDOR		Yes, (Derived z1000)	Yes, (gpm1000)	No.	
Water Content of Soil Layer	Daily	mean			GUESS		Yes, (Derived sw1, sw2, sw3, sw4, sw5)	Yes, (Proxy: sabl1, sabl2, sabl3, sabl4, sabl5)	No.	Total?
Water Content of Soil Layer	Monthly				GUESS, AQUATICS,		Yes, (Derived sw1, sw2, sw3, sw4, sw5)	Yes, (Proxy: sabl1, sabl2, sabl3, sabl4, sabl5)	No.	Monthly?
Surface Runoff	Daily	mean			AQUATICS,		Yes, (rsn)	Yes, (runoff)	No.	
Sea level pressure	Daily	mean				VORTEX	Yes, (mslp)	No. (Pressyearsea)	Yes, (psl)	
Dew point temperature	Daily	mean	LEIC		B-HYPE		Yes, (Td)	No. (Proxy: q2m, tmp2m, pressfc, pseudo)	Yes, [tdps]	
Total Runoff	Monthly				AQUATICS,		Yes, (rsn)	No.	Yes, (trnm)	Monthly?
Snowfall flux	Daily	mean			GUESS, B-HYPE		Yes, (sf)	No.	Yes, (prsn)	
Water Evaporation from Soil	Daily				GUESS		Yes, (e)	No.	Yes, (Evlwr)	"First out if they include transpiration
Water Evaporation from Soil	Monthly				GUESS, AQUATICS,		Yes, (e)	No.	Yes, (Evlwr)	Monthly?
Sea surface temperature	Daily	mean				VORTEX	Yes, (sst)	No.	No. (Proxy: monthly:sst)	
Soil SUPFZZ Support NUTS	Daily	mean			AQUATICS,		Yes, (rsnd)	No.	No.	
Geopotential 500mb	Daily	mean				VORTEX, EMBA	Yes, (z500)	No.	No.	
SPEC SLST	Daily	maximum			GUESS		Yes, (z0fg)	No.	No.	
Precipitation	At noon	Accumulated in the last 24h	FWI				No.	Yes, (pmiale)	Yes, [pr]	
Surface air pressure	Daily	mean			JULES, ICS, B-HYPE		No. (Proxy:msl)	Yes, (pmsl2)	No. (Proxy:psl)	
Surface air pressure	Monthly				ICS		No. (Proxy:msl)	Yes, (pmsl2)	No. (Proxy:psl)	
Specific humidity	Daily	mean			JULES, AQUATICS, GUESS, GLAM		No.	Yes, (q2m)	No.	
Moisture in Upper Portion of Soil Column	Monthly				AQUATICS,		No. (Proxy:swd1)	Yes, (sabl-1)	No.	What does Upper Portion mean?, Monthly?
Cloud area fraction	Daily	mean				EMBA	No. (Proxy:lcc)	No.	Yes, (cll)	
Total Soil Moisture Content	Daily	mean			AQUATICS,		No. (Proxy:swd1, swd2, swd3, swd4)	No. (wmoiscurrent, sabl1, sabl2, sabl3, sabl4)	Yes, (mrsol)	
Relative humidity	At 7am, 2pm and 9pm (local time)	point	FET				No. (Proxy:2d)	No. (Proxy:q2m, tmp2m, pressfc, pseudo)	No. (Proxy:tdps)	
Relative humidity	At noon local standard time or daily mean	point	FWI				No. (Proxy:2d)	No. (Proxy:q2m, tmp2m, pressfc, pseudo)	No. (Proxy:tdps)	
Relative humidity	Daily	mean			COMS, B-HYPE		No. (Proxy:2d)	No. (Proxy:q2m, tmp2m, pressfc, pseudo)	No. (Proxy:tdps)	
Wind speed (at 10m)	At 7am, 2pm and 9pm (local time)	point	FET				No. (Proxy:10u, 10v)	No. (Proxy:wmoiscurrent, currents)	No. (Proxy:sab, sev)	
Wind speed (at 10m)	At noon local standard time	point	FWI				No. (Proxy:10u, 10v)	No. (Proxy:wmoiscurrent, currents)	No. (Proxy:sab, sev)	
Surface downwelling longwave flux in air	At 7am, 2pm and 9pm (local time)	point	FET				No. (Proxy: daily sin4)	No. (Rwsgl-dwsfc)	No.	
Surface downwelling shortwave flux in air	At 7am, 2pm and 9pm (local time)	point	FET				No. (Proxy: daily sin4)	No. (Rwsgl-dwsfc)	No.	
Cloudiness (in octas)	At 7am, 2pm and 9pm (local time)	point	FET				No. (Proxy:lcc)	No.	No. (Proxy: cll)	
Relative humidity at 300mb	Daily	mean				VORTEX	No. (Proxy:r-q)	No.	No.	
Ozone	Daily	mean			JULES		No. (Proxy:O3, Ozone-low, cloning:ratio=, sub: Total column ozone)	No.	No.	O needs clarification
Skin temperature	Daily	mean			Meteostatic		No.	No. (Proxy: tsrphf1)	No.	
Air temperature	At noon local standard time	point	FWI				No.	No.	No.	
Ship Observations Gridded Grid5 Tsfc5	Daily	mean			GUESS		No.	No.	No.	
Ship Observations Gridded Grid5 Tsfc5	Daily	maximum			GUESS		No.	No.	No.	
Ship Observations Gridded Grid5 Tsfc5	Daily	minimum			GUESS		No.	No.	No.	
Precipitation	Daily rate	maximum			GUESS		No.	No.	No.	
SnowPrep sites c.COMPONENT a.sno	Daily	mean			ICS, MORDOR		No.	No.	No.	
SnowPrep sites c.COMPONENT a.sno	Monthly				ICS		No.	No.	No.	
SnowPrep sites c.COMPONENT a.sno	Daily	mean			ICS, MORDOR		No.	No.	No.	
SnowPrep sites c.COMPONENT a.sno	Monthly				ICS		No.	No.	No.	
U-component 100 metre wind speed	Daily	mean				VORTEX, EMBA, ICS	No.	No.	No.	
V-component 100 metre wind speed	Daily	mean				VORTEX, EMBA, ICS	No.	No.	No.	
Surface snow amount	Daily	mean			GUESS		No.	No.	No.	
Surface moisture	Daily	mean	LEIC				No.	No.	No.	What does it refer to? Humidity? Water in soil?
CLASS SKY 2D DOWN SURFACE SW FLUX	Daily	mean			ICS, GUESS		No.	No.	No.	What does 2D refer to?
CLASS SKY 2D DOWN SURFACE SW FLUX	Monthly				ICS		No.	No.	No.	
Water Evaporation flux	Daily	mean			B-HYPE		No.	No.	No.	
1.5M SPECIFIC HUMIDITY CLWR TILES	Daily	mean			GUESS		No.	No.	No.	
DRAINCK OUTFLOW	Daily	mean			MeteoRice		No.	No.	No.	This variable needs clarification
soil Moisture Product Tsfc5	Daily	mean			MeteoRice		No.	No.	No.	What does it mean?
soil Moisture Product Tsfc5 da mrfc	Daily	mean			MeteoRice		No.	No.	No.	What does it mean?
NET DOWN SURFACE LW RAD FLUX [used for Ice]	Daily	mean			JULES		No.	No.	No.	
GRFLUSE FLUX	Daily	mean			JULES		No.	No.	No.	
CANOPY THROUGHFALL FLUX	Daily	mean			AQUATICS,		No.	No.	No.	
Evaporation from Canopy	Daily	mean			AQUATICS,		No.	No.	No.	
Sublimation from Snow	Daily	mean			AQUATICS,		No.	No.	No.	
Transpiration	Monthly				AQUATICS,		No.	No.	No.	Monthly?
Soil Frozen Water Content	Monthly				AQUATICS,		No.	No.	No.	Monthly?
Solar Radiation (Global Horizontal Radiation)	Daily	mean				ULBEDS, EMBA, ICS	No.	No.	No.	O needs clarification Horizontal?