Variables	Frequency	Aggregation	EUP_WP22	EUP_WP23	EUP_WP23	SPICE_APH_1	Available at SYSTEM2 seasonal timeband	Available at CFS_v2 (reforecast)	Available at SPICE3	Comments
Air temperature	00 7am, 2pm and 9pm (local time)	point	PET				Yes, (Sliwagi[20]	Yes, (Sliwagi[mq2m]	Yes, (Sliwagi[tas]	
Air temperature	Daily	mean	DSS, HI, Hq, KDD, LDEC		AQUATOOL, (e-HYPE, COMS, LPJmL, JULES, GUESS, WORDOR, ICS)	VORTEX, ESM-A	Yes, (mean2D1)	Yes, (mq2m)	Yes, (tas)	
Air temperature	Daily	minimum	Tr ≥ 0°C, C		COMS, GUESS, GLAM, (AQUATOOL, (E-HYPE), WORDOR)	ULBEIDS	Yes, (mn2D1)	Yes, (tmin)	Yes, (tasmin)	
Air temperature	Daily	maximum	HI, PWI		COMS, GUESS, GLAM, (AQUATOOL, (E-HYPE), WORDOR)	ULBEIDS, ESM-A	Yes, (mx2D1)	Yes, (tmax)	Yes, (tasmax)	
Air temperature	Monthly	mean			(ICS)		Yes, (mean2D1)	Yes, (mq2m)	Yes, (tas)	
Precipitation	Daily	mean	DSP, Hyl		AQUATOOL, (e-HYPE, COMS, LPJmL, JULES, GUESS, GLAM, WORDOR, ICS)	ULBEIDS, ICS	Yes, (tp)	Yes, (prcstd)	Yes, (pr)	Accumulated or flux, which is preferred?
Precipitation	Monthly				(ICS)		Yes, (tp)	Yes, (prcstd)	Yes, (pr)	
Surface downwelling shortwave flux in air	Daily	mean			COMS, LPJmL, JULES, GLAM, (WORDOR)	ULBEIDS, ESM-A, ICS	Yes, (rsd-4)	Yes, (dswrfs)	Yes, (rsds)	
Surface downwelling longwave flux in air	Daily	mean			COMS, LPJmL, JULES		Yes, (ald4)	Yes, (dlwrfs)	Yes, (rlds)	
Wind speed (at 10m)	Daily	mean	PWI		COMS, JULES, (AQUATOOL), (E-HYPE)	VORTEX, ESM-A	Yes, (Zonend-10u, 10v)	Yes, (u10mstd-u10mstd, v10mstd-v10mstd)	Yes, (Zonend-uas, vas)	VORTEX and ESM-A really want u/v components
Wind speed (at 10m)	Daily	maximum			(GUESS)		Yes, (Zonend-10u, 10v)	Yes, (u10mstd-u10mstd, v10mstd-v10mstd)	Yes, (Zonend-uas, vas)	
Wind speed (at 10m)	Monthly	mean	CPU				Yes, (Zonend-10u, 10v)	No (u10mstd-u10mstd, v10mstd-v10mstd)	Yes, (Zonend-uas, vas)	
Geopotential 850mb	Daily	mean				VORTEX, ESM-A	Yes, (z850)	Yes, (Zonend-z850)	No, (proxy: monthly var850)	
U-component 850mb Wind speed	Daily	mean				VORTEX	Yes, (u850)	Yes, (ua850)	No, (Proxy: monthly var850)	
V-component 850mb Wind speed	Daily	mean				VORTEX	Yes, (v850)	Yes, (va850)	No, (Proxy: monthly var850)	
U-component 925mb wind speed	Daily	mean				VORTEX	Yes, (u925)	Yes, (ua925)	No.	
V-component 925mb wind speed	Daily	mean				VORTEX	Yes, (v925)	Yes, (va925)	No.	
Geopotential height at 700hPa	Daily	At 12 UTC			WORDOR		Yes, (Zonend-z700)	Yes, (gpm700)	No.	
Geopotential height at 1000hPa	Daily	At 12 UTC			WORDOR		Yes, (Zonend-z1000)	Yes, (gpm1000)	No.	
Surface Runoff	Daily	mean			(AQUATOOL)		Yes, (sro)	Yes, (rusuaff)	No.	
Sea level pressure	Daily	mean				VORTEX	Yes, (msl)	No. (Proxy: psmsl)	Yes, (psl)	
Dew point temperature	Daily	mean	LDEC		(E-HYPE)		Yes, (2d)	No. (Proxy: q2m, tmp2m, psmsl)	Yes, (tdps)	
Total Runoff	Monthly				(AQUATOOL)		Yes, (ro)	No.	Yes, (mrro)	Monthly?
Snowfall flux	Daily	mean			(E-HYPE)		Yes (sf)	No.	Yes, (prsn)	
Water Evaporation from Soil	Daily				(GUESS)		Yes, (e)	No.	Yes, (fsitwr)	*Find out if they include transpiration
Water Evaporation from Soil	Monthly				GUESS, (AQUATOOL)		Yes, (e)	No.	Yes, (fsitwr)	Same notes as daily
Water Content of Soil Layer	Daily	mean			(GUESS)		Yes, (Zonend-swc1, swc2, swc3, swc4)	No. (Proxy: swfm1, swfm2, swfm3, swfm4)	No.	Total?
Water Content of Soil Layer	Monthly				GUESS, (AQUATOOL)		Yes, (Zonend-swc1, swc2, swc3, swc4)	No. (Proxy: swfm1, swfm2, swfm3, swfm4)	No.	Monthly?
Sea surface temperature	Daily	mean				VORTEX	Yes, (sst)	No.	No. (Proxy: monthly tos)	
SUN SURFACE HUMIDITY RATE	Daily	mean			(AQUATOOL)		Yes, (sw4)	No.	No.	According to the documentation they are only available from 1981-1993 and 2000-present
Geopotential 500mb	Daily	mean				VORTEX, ESM-A	Yes, (z500)	No.	No.	
WIND GUST	Daily	maximum			(GUESS)		Yes, (1d5g)	No.	No.	
Precipitation	6 hours	Accumulated in the last 24h	PWI				No.	Yes, (prcstd)	Yes, (pr)	
Total Soil Moisture Content	Daily	mean			(AQUATOOL)		No. (Proxy:swvl1, swvl2, swvl3, swvl4)	Yes, (Zonend-swfm1, swfm2, swfm3, swfm4)	Yes, (mrsos)	
Surface air pressure	Daily	mean			(GUES, (ICS, (E-HYPE)		No. (Proxy:msl)	Yes, (pressfc)	No. (Proxy:ps)	
Surface air pressure	Monthly				(ICS)		No. (Proxy:msl)	Yes, (pressfc)	No. (Proxy:ps)	
Specific humidity	Daily	mean			(JULES), (AQUATOOL), (GUESS), (GLAM)		No.	Yes, (q2m)	No.	
Moisture in Upper Portion of Soil Column	Monthly				(AQUATOOL)		No. (Proxy:swvl1)	Yes, (swfm1)	No.	What does Upper Portion mean? Monthly?
Surface downwelling longwave flux in air	00 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy: daily dtr4)	Yes, (Sliwagi-dtr4)	No.	
Surface downwelling shortwave flux in air	00 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy: daily tasd)	Yes, (Sliwagi-dtr4)	No.	
Cloud area fraction	Daily	mean				ESM-A	No. (Proxy:tcc)	No.	Yes, (clt)	
Relative humidity	00 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy:2d)	No. (Proxy:q2m, tmp2m, psmsl)	No. (Proxy:hfds)	
Relative humidity	00 noon local standard time on daily mean	point	PWI				No. (Proxy:2d)	No. (Proxy:q2m, tmp2m, psmsl)	No. (Proxy:hfds)	
Relative humidity	Daily	mean			COMS, (E-HYPE)		No. (Proxy:2d)	No. (Proxy:q2m, tmp2m, psmsl)	No. (Proxy:hfds)	
Wind speed (at 10m)	00 7am, 2pm and 9pm (local time)	point	PET				No (Proxy:10u, 10v)	No. (Proxy:u10mstd-u10mstd, v10mstd-v10mstd)	No. (Proxy: uas, vas)	
Wind speed (at 10m)	00 noon local standard time	point	PWI				No. (Proxy:10u, 10v)	No. (Proxy:u10mstd-u10mstd, v10mstd-v10mstd)	No. (Proxy: uas, vas)	
Cloudiness (in octas)	00 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy:tcc)	No.	No. (Proxy: clt)	
Relative humidity at 850mb	Daily	mean				VORTEX	No. (Proxy:r14)	No.	No.	
Ozone	Daily	mean			(JULES)		No. (Proxy:O3, Ozone ease missing-value-1 lon3. Total Column ozone)	No.	No.	0 needs clarification
Skin temperature	Daily	mean			Wetlandarea		No.	No. (Proxy: mpsts)	No.	
Air temperature	00 noon local standard time	point	PWI				No.	No.	No.	
Air temperature 1.5m (Tas/Ts/Tcl/Tsh/Tsl/Tu/Tb)	Daily	mean			(GUESS)		No.	No.	No.	
Air temperature 1.5m (Tas/Ts/Tcl/Tsh/Tsl/Tu/Tb)	Daily	maximum			(GUESS)		No.	No.	No.	
Air temperature 1.5m (Tas/Ts/Tcl/Tsh/Tsl/Tu/Tb)	Daily	minimum			(GUESS)		No.	No.	No.	
Precipitation	hourly rate	maximum			GUESS		No.	No.	No.	
Small-scale wind U-component 10 m/sec	Daily	mean			ICS, (WORDOR)		No.	No.	No.	
Small-scale wind U-component 10 m/sec	Monthly				ICS		No.	No.	No.	
Small-scale wind U-component 10 m/sec	Daily	mean			ICS, (WORDOR)		No.	No.	No.	
Small-scale wind U-component 10 m/sec	Monthly				ICS		No.	No.	No.	
U-component 100 metre wind speed	Daily	mean				VORTEX, ESM-A, ICS	No.	No.	No.	
V-component 100 metre wind speed	Daily	mean				VORTEX, ESM-A, ICS	No.	No.	No.	
Surface snow amount	Daily	mean			GUESS		No.	No.	No.	
Surface moisture	Daily	mean	LDEC				No.	No.	No.	What does it refer to? Humidity? Water in soil?
CLEAR-SKY (D) DOWN SURFACE SW FLUX	Daily	mean			ICS, (GUESS)		No.	No.	No.	What does (D) refer to?
CLEAR-SKY (D) DOWN SURFACE SW FLUX	Monthly				ICS		No.	No.	No.	
Water sublimation flux	Daily	mean			(E-HYPE		No.	No.	No.	
1.5M SPECIFIC HUMIDITY OVER TILES	Daily	mean			(GUESS)		No.	No.	No.	
GRIDBOX OUTFLOW	Daily	mean			(WaterBal)		No.	No.	No.	This variable needs clarification
INT FRWATT PRODUCTIVITY	Daily	mean			(WaterBal)		No.	No.	No.	What does it mean?
INT FRWATT PRODUCTIVITY Mm/DTN	Daily	mean			(WaterBal)		No.	No.	No.	What does it mean?
NET DOWN SURFACE LW RAD (Longwave Radiation)	Daily	mean			(JULES)		No.	No.	No.	
SRFFUNB FLUX	Daily	mean			(JULES)		No.	No.	No.	
Water Transpiration (Tas/Ts/Tcl/Tsh/Tsl/Tu/Tb)	Daily	mean			(AQUATOOL)		No.	No.	No.	
Evaporation from Canopy	Daily	mean			(AQUATOOL)		No.	No.	No.	
Interception losses from canopy	Daily	mean			(AQUATOOL)		No.	No.	No.	
Transpiration	Monthly				(AQUATOOL)		No.	No.	No.	Monthly?
Soil Frozen Water Content	Monthly				(AQUATOOL)		No.	No.	No.	Monthly?
Water Radiation (Global Horizontal Radiation)	Daily	mean				ULBEIDS, ESM-A, ICS	No.	No.	No.	0 needs clarification. Horizontal?