Variables	Frequency	Aggregation	EUP_MPI2	EUP_MPI2	EUP_MPI2	EUP_MPI2	Varios, sets, etc	Available at SYSTEMS (Central Hindkush)	Available at CPL (or referenced	Available at SPICE	Comments
Air temperature	Daily	mean			GSS, AL, tsg, HEB, UDC	AQUATOOL, CGIAR, CGIAR, uTool, ICS, GLIMS, SUBFIG, MORGON, ICS	KORTEX, SNIEA,	mean2024	tmp2m	tas	
Air temperature	Daily	minimum			Tn 2.7°C, CI	CGIAR, SUBFIG, AQUATOOL, uFAHR, (MORGON)	GLIMS2G	min2024	tmin	tasmin	
Air temperature	Daily	maximum			HL PWI	CGIAR, SUBFIG, GLIMS, AQUATOOL, uFAHR, (MORGON)	GLIMS2G, SNIEA,	max2024	tmax	tasmax	
Air temperature	Monthly	mean				ICS		mean2024	tmp2m	tas	
Precipitation	Daily	mean			CGIP, HyI	AQUATOOL, E-HYPE, CGIAR, uTool, ICS, GLIMS, SUBFIG, GLIMS, MORGON, ICS	GLIMS2G, ICS	tp	prcptot	pr	Accumulated or flux, which is preferred?
Precipitation	Monthly					ICS		tp	prcptot	pr	
Surface downwelling shortwave flux in air	Daily	mean				CGIAR, uFAHR, AQUATOOL, GLIMS, (MORGON)	GLIMS2G, SNIEA, ICS	rsnd	dswrds	rsds	
Surface downwelling longwave flux in air	Daily	mean				CGIAR, uFAHR, AQUATOOL		rsnd	dlwrds	dlds	
Wind speed (at 10m)	Daily	mean			PWI	CGIAR, AQUATOOL, uFAHR, (MORGON)	KORTEX, SNIEA,	Derived 10u (8h), 10v (8h)	Derived:sqrt(u10_mean^2+v10_mean^2)	Derived:sqrt(u10_mean^2+v10_mean^2) (3h), sfc (3h)	VOSTEX: (and SNIEA) rarely need u/v components
Wind speed (at 10m)	Daily	maximum				(GSUEB2)		Derived 10u (8h), 10v (8h)	Derived:sqrt(u10_max^2+v10_max^2)	Derived:sqrt(u10_max^2+v10_max^2) (3h), sfc (3h)	
Wind speed (at 10m)	Monthly	mean			CFU			Derived 10u (8h), 10v (8h)	Derived:sqrt(u10_mean^2+v10_mean^2)	Derived:sqrt(u10_mean^2+v10_mean^2) (mon), sfc (mon)	
Geopotential 500mb	Daily	mean					KORTEX, SNIEA	z850	Derived:z500 (3h)	Proxy: zg850 (mon)	
Geopotential 500mb (time series)	Daily	mean					KORTEX	z850	ncwa850	Proxy: ncwa850 (mon)	
Geopotential 500mb (time series)	Daily	mean					KORTEX	z850	ncwa850	Proxy: ncwa850 (mon)	
Geopotential 500mb (time series)	Daily	mean					KORTEX	z825	ncwa825	No.	
Geopotential 500mb (time series)	Daily	mean					KORTEX	z825	ncwa825	No.	
Geopotential height at 1000hPa	Daily	At 12 UTC	X			MORGON		Derived:z700 (3h)	gpm700	No.	
Geopotential height at 1000hPa	Daily	At 12 UTC	X			MORGON		Derived:z500 (3h)	gpm1000	No.	
Surface Runoff	Daily	mean				(AQUATOOL)		sro	runoff	No.	
Sea level pressure	Daily	mean					KORTEX	msl	Proxy:psl (6h)	psl	
Dew point temperature	Daily	mean			UDC	(E-HYPE)		2d	Proxy:tp2m (6h), tmp2m (6h), prmsl (6h)	tdps	
Total Runoff	Monthly					(AQUATOOL)		mt	No.	mro	Monthly?
Snowfall flux	Daily	mean				(GUEB2, (E-HYPE)		sf	No.	prsn	
Water Evaporation from Soil	Daily					(GSUEB2)		e	No.	Evbs	Total sw? they include transpiration
Water Evaporation from Soil	Monthly					(GUEB2, (AQUATOOL)		e	No.	Evbs	Accumulating flux? Monthly mean?
Water Content of Soil Layer	Daily	mean				(GSUEB2)		Derived: swvl1, swvl2, swvl3, swvl4 (24h)	Proxy: sulfm1, sulfm2, sulfm3, sulfm4 (6h)	No.	Total?
Water Content of Soil Layer	Monthly					(GUEB2, (AQUATOOL)		Derived: swvl1, swvl2, swvl3, swvl4 (24h)	Proxy: sulfm1, sulfm2, sulfm3, sulfm4 (6h)	No.	Monthly?
Sea surface temperature	Daily	mean					KORTEX	sst	No.	Proxy: tos (mon)	
Sub-surface runoff sum	Daily	mean				(AQUATOOL)		ssrd	No.	No.	Monthly or hourly? Accumulation? this can also evaluate from other water and energy variables, present
Geopotential 500mb	Daily	mean					KORTEX, SNIEA	z825	No.	No.	
Wind Gust	Daily	maximum				(GSUEB2)		i10fg	No.	No.	
Precipitation	24 mean	24 mean based on the last 24h			PWI			tp	No.	prcptot	pr
Total Soil Moisture Content	Daily	mean				(AQUATOOL)		Proxy: swvl1, swvl2, swvl3, swvl4 (24h)	Derived: (sum: sulfm1, sulfm2, sulfm3, sulfm4)/(50)	mrso	
Surface air pressure	Daily	mean				(GUEB2, (E-HYPE)		Proxy:msl (6h)	prmsl	Proxy:psl (3h)	
Surface air pressure	Monthly					(ICS)		Proxy:msl (6h)	prmsl	Proxy:psl (3h)	
Specific humidity	Daily	mean				(GUEB2, (AQUATOOL), (GUEB2), (GUAM)		No.	q2m	No.	
Moisture in Upper Portion of Soil Column	Monthly					(AQUATOOL)		Proxy:swvl1 (24h)	sulfm1	No.	What does Upper Portion mean? Monthly?
Surface downwelling longwave flux in air	At 7am, 2pm and 9pm (local time)	point		PET				Proxy: rsnd (24h)	no. (frequencies)	No.	
Surface downwelling shortwave flux in air	At 7am, 2pm and 9pm (local time)	point		PET				Proxy: rsnd (24h)	no. (frequencies)	No.	
Cloud cover fraction	Daily	mean					SNIEA	Proxy:tcc(24h)	No.	cl	
Air temperature	At 7am, 2pm and 9pm (local time)	point		PET				Proxy: 2t (6h)	Proxy: tmp2m (6h)	Proxy: tas (6h)	
Relative humidity	At 7am, 2pm and 9pm (local time)	point		PET				Proxy:2d (6h)	Proxy:rh(6h): (tmp2m (6h), prmsl (6h))	Proxy:hfls (3h)	
Relative humidity	At mean local standard time or daily mean	point		PWI				Proxy:2d (6h)	Proxy:rh(6h): (tmp2m (6h), prmsl (6h))	Proxy:hfls (3h)	
Relative humidity	Daily	mean				CGIAR, (E-HYPE)		Proxy:2d(6h)	Proxy:rh(6h): (tmp2m (6h), prmsl (6h))	Proxy:hfls (3h)	
Wind speed (at 10m)	At 7am, 2pm and 9pm (local time)	point		PET				Proxy:10u (6h), 10v (6h)	Proxy:sqrt(u10_mean^2+v10_mean^2)	Proxy:sfcwind (3h), sfc (3h)	
Wind speed (at 10m)	At mean local standard time	point		PWI				Proxy:10u (6h), 10v (6h)	Proxy:sqrt(u10_mean^2+v10_mean^2)	Proxy:sfcwind (3h), sfc (3h)	
Cloudiness (in octas)	At 7am, 2pm and 9pm (local time)	point		PET				Proxy:tcc (6h)	No.	Proxy: cl (3h)	
Relative humidity at 1000mb	Daily	mean					KORTEX	Proxy: r (6h) & (24h)	No.	No.	
Ozone	Daily	mean				(GUEB2)		Proxy:O3 (Ozone mass mixing ratio (24h) or Proxy: tcoz (Total column ozone (24h))	No.	No.	It needs clarification
Skin temperature	Daily	mean				Meteosatsa		No.	Proxy: tmpsfc (6h)	No.	
Air temperature	At mean local standard time	point		PWI				No.	No.	No.	
1.5M Temperature over tiles	Daily	mean				(GSUEB2)		No.	No.	No.	
1.5M Temperature over tiles	Daily	maximum				(GSUEB2)		No.	No.	No.	
1.5M Temperature over tiles	Daily	minimum				(GSUEB2)		No.	No.	No.	
Precipitation	Hourly rate	maximum				GUEB2		No.	No.	No.	
10 meter wind component U grid	Daily	mean				ICS, (MORGON)		No.	No.	No.	
10 meter wind component V grid	Monthly					ICS		No.	No.	No.	
10 meter wind component U grid	Daily	mean				ICS, (MORGON)		No.	No.	No.	
10 meter wind component V grid	Monthly					ICS		No.	No.	No.	
10 meters wind speed	Daily	mean					KORTEX, SNIEA, ICS	No.	No.	No.	
10 meters wind speed	Daily	mean					KORTEX, SNIEA, ICS	No.	No.	No.	
Surface snow amount	Daily	mean				GUEB2		No.	No.	No.	
Surface roughness	Daily	mean			UDC			No.	No.	No.	What does Surface is? Roughness? Roughness is sea?
Clear-sky (O) down surface SW flux	Daily	mean				ICS, (GSUEB2)		No.	No.	No.	What does (O) refer to?
Clear-sky (O) down surface SW flux	Monthly					ICS		No.	No.	No.	
Water evaporation flux	Daily	mean				(E-HYPE		No.	No.	No.	
1.5M Specific humidity over tiles	Daily	mean				(GSUEB2)		No.	No.	No.	
Outflow runoff	Daily	mean				(MeteoRoo)		No.	No.	No.	This variable needs clarification
Net primary productivity	Daily	mean				(MeteoRoo)		No.	No.	No.	What does it mean?
Net primary productivity per PFT	Daily	mean				(MeteoRoo)		No.	No.	No.	What does it mean?
Net down surface shortwave flux (used for melt)	Daily	mean				(GUEB2)		No.	No.	No.	
Diffuse flux	Daily	mean				(GUEB2)		No.	No.	No.	
Canopy interceptation rate	Daily	mean				(AQUATOOL)		No.	No.	No.	
Evaporation from Canopy	Daily	mean				(AQUATOOL)		No.	No.	No.	
Transpiration by crops	Daily	mean				(AQUATOOL)		No.	No.	No.	
Transpiration	Monthly					(AQUATOOL)		No.	No.	No.	Monthly?
Soil Frozen Water Content	Monthly					(AQUATOOL)		No.	No.	No.	Monthly?
Outer Radiation (Global Horizontal Radiation)	Daily	mean					GLIMS2G, SNIEA, ICS	No.	No.	No.	It needs clarification (Horizontal)?