SIOS Core Data	SIOS core data definition, TBD during the workshop	GCOS hierarchical structure/Domain / Subdomain / Observed Variables	GCMD hierarchical structure *Term / Variable_Level_1 / Variable_Level_2*	GCOS Definition	GCMD Definition	Notes and comments	Mapped
SCD 2.1. GLACIER MASS BALANCE		TERRESTRIAL / CRYOSPHERE / GLACIER MASS CHANGE	GLACIERS/ICE SHEETS / GLACIER MASS BALANCE/ICE SHEET MASS BALANCE /	Annual change in total mass of glacier (at the end of the ablation period)		GCOS definition is OK. Need for point mass balance for modelling and remote sensing	Yes, SCD and SCDC
SCD 2.2. GLACIER ELEVATION	**Height of the surface of the glacier. Elevation of the point measured at the surface of the glacier in the given time.**	TERRESTRIAL / CRYOSPHERE / GLACIER ELEVATION CHANGE	GLACIERS/ICE SHEETS / GLACIER ELEVATION/ICE SHEET ELEVATION /	2d map of change in height of surface of glacier			Yes, SCD and SCDC
SCD 2.3. ICE VELOCITY	**Horizontal vector of the surface ice flow, obtained from in-situ measurements of stake position or GPS measurements.**	TERRESTRIAL / CRYOSPHERE / ICE VELOCITY	SNOW/ICE / ICE VELOCITY /	Surface-parallel vector of the surface ice flow		Commnet from Malgorzata Blaszczyk (UŚ) Should we state in definition the source of data (GPS, stakes, etc.)?. If so, then what about remote sensing sources such as TSL, satellite?	Yes, SCD and SCDC
SCD 2.4. PERMAFROST TEMPERATURE		TERRESTRIAL / CRYOSPHERE / THERMAL STATE OF PERMAFROST	FROZEN GROUND / PERMAFROST / PERMAFROST TEMPERATURE	Ground temperatures measured at specified depths along profiles –	Pertaining to the temperature of permafrost, frozen subsoil. layer of soil or rock, at some depth beneath the	No clear commnet so far which definition is better	Yes, SCD and SCDC

					surface, in which the temperature has been continuously below 0°C for at least several years; it exists where summer heating fails to reach the base of the layer of frozen ground.		
SCD 2.5. ACTIVE LAYER		TERRESTRIAL / CRYOSPHERE / ACTIVE LAYER THICKNESS	FROZEN GROUND / ACTIVE LAYER /	Thickness of seasonally thawed ground measured in (cm) -	Active layer, also called frost zone or mollisol, is part of the soil included with the suprapermafrost layer (i.e., existing above permafrost) that usually freezes in winter and thaws in summer. Its bottom surface is the frost table, beneath which may lie permafrost or talik. The depth of the active layer varies anywhere from a few inches to several feet.	No clear commnet so far which definition is better	Yes, SCDC
SCD 2.6 PERMAFROST	Permafrost likelihood distribution maps	TERRESTRIAL / CRYOSPHERE	FROZEN GROUND / PERMAFROST /		1. (Also called perennially frozen ground, pergelisol, permanently frozen ground.) A layer of soil or bedrock at a variable depth beneath the surface	No clear commnet so far which definition is better	**No**

					of the earth in which the temperature has been below freezing continuously from a few to several thousands of years. Permafrost exists where the summer heating fails to descend to the base of the layer of frozen ground. A continuous stratum of permafrost is found where the annual mean temperature is below about 5C (23F). 2. As limited in application by P. F. Svetsov, soil that is known to have been frozen for at least a century.		
SCD 2.7. GROUND ICE		TERRESTRIAL / CRYOSPHERE / ICE CONTENT	FROZEN GROUND / GROUND ICE /		A general term referring to all types of ice contained in freezing and frozen ground. Ground ice occurs in pores, cavities, voids or other openings in soil or rock and includes massive		Yes, SCDC, NPI probably thinking about BASAL ICE

					ice. It may occur as lenses, wedges, veins, sheets, seams, irregular masses, or as individual crystals or coatings on mineral or organic particles. Perennial ground ice can only occur within permafrost bodies.		
SCD 2.8. SNOW DEPTH	**Snow depth is the distance between the snowpack surface and the underlying ground/ice, measured perpendicular to the snow surface.**	TERRESTRIAL / CRYOSPHERE / SNOW DEPTH	SNOW/ICE / SNOW DEPTH /	Snow depth is the perpendicular distance between snowpack surface and the underlying ground.	Pertaining to the thickness of the snowpack throughout the year.	Shall it include GPR and TLS measurements or only point measurements?	Yes, SCD and SCDC
SCD 2.9. SNOW WATER EQUIVALENT	**It is the amount of water that results from the snowpack melting in a unit of area.**	TERRESTRIAL / CRYOSPHERE / SNOW WATER EQUIVALENT	SNOW/ICE / SNOW WATER EQUIVALENT /	It is the depth of water that results from the snowpack melting in a unit of area.	Pertaining to the measurement of the amount of water in a given snowpack.		Yes, SCDC
SCD 2.10 SNOW COVER	**Binary inforamtion about snow present on the ground**	TERRESTRIAL / CRYOSPHERE / SNOW AND ICE	SNOW/ICE / SNOW COVER /		Pertaining to the extent, depth, and longevity of the snowpack.		Yes, SCD and SCDC
SCD 2.11 SNOW/ICE TEMPERATURE		TERRESTRIAL / CRYOSPHERE / SNOW AND ICE	SNOW/ICE / SNOW/ICE TEMPERATURE /		Pertaining to the measured internal temperature of snow/ice pack(s). -		Yes, SCD and SCDC
SCD 2. ?? NEW SUGGES - TIONS							
BASAL ICE	**Amount of ice**						

	between the ground surface and the snowpack						
SNOW COVER AREA	Percentage of snow on the ground in the defined area						
FIRN	Water table depth from the snow surface, density and temperature						
GROUND SUBSIDENCE	Downward movement of the ground causing a lowering of the ground surface resulting from the melting of ground ice in excess of pore fillings						