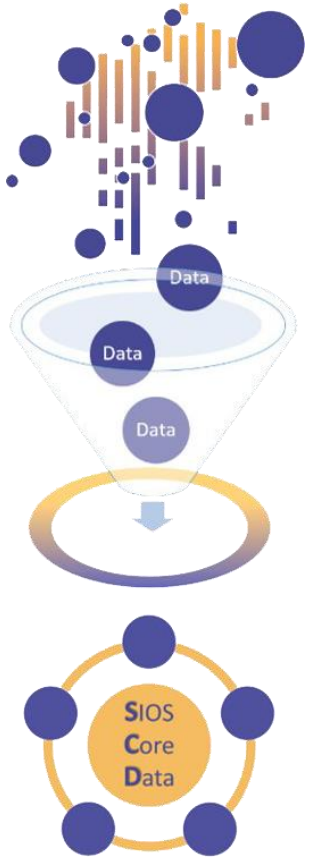
SIOS Core Data WORKSHOP



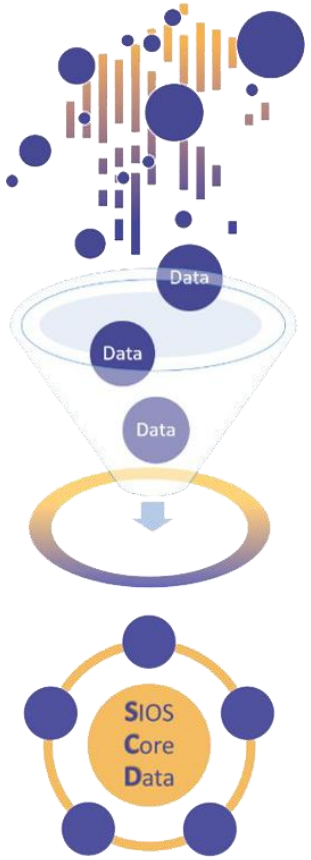
SIOS Core Data WORKSHOP

Programme Day 1

13:00 – 13:45 Keynote lecture by Sandy Starkweather (SAON): Improving data interoperability and reuse under SAON's ROADS process.
13:45 – 14:00 *Break*
14:00 – 14:45 SIOS Core Data by Darek Ignatiuk (SIOS-KC)
14:45 – 15:00 *Break*
15:00-16:30 Work in subgroups on the definition of variables:

Room_1: Atmosphere
Room_2: Cryosphere
Room_3: Oceans Room_4: Atmospheric composition/aerosols
Room_5: Biodiversity/Terrestrial

16:30 – 16:45 *Break*
16:45 – 17:30 Summary and discussion about adding the new variables to the core data list.



SIOS Core Data WORKSHOP

Programme Day 2

9:00 – 9:45 Keynote lecture by Ketil Isaksen (MET.NO): Monitoring of weather and climate on Svalbard - standardisation, harmonisation and experiences at MET Norway

9:45 – 10:00 *Break*

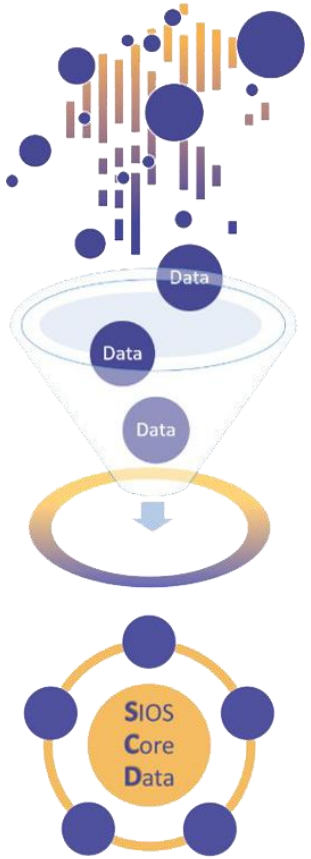
10:00-12:00 Work in subgroups on SCD measurement protocols and calibration:

- Room_1: Atmosphere
- Room_2: Cryosphere
- Room_3: Oceans
- Room_4: Atmospheric composition/aerosols
- Room_5: Biodiversity/Terrestrial

12:00 – 12:30 *Break*

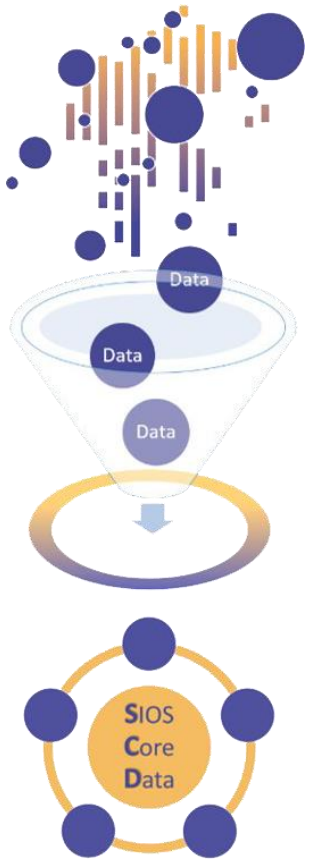
12:30 – 13:30 SIOS Core Data as Analysis Ready Data supporting Science for Service and Society by Øystein Godøy (SIOS-KC)

13:30 – 14:00 Summary and outcomes from the subgroups, plans and next steps.



Why SIOS Core Data?

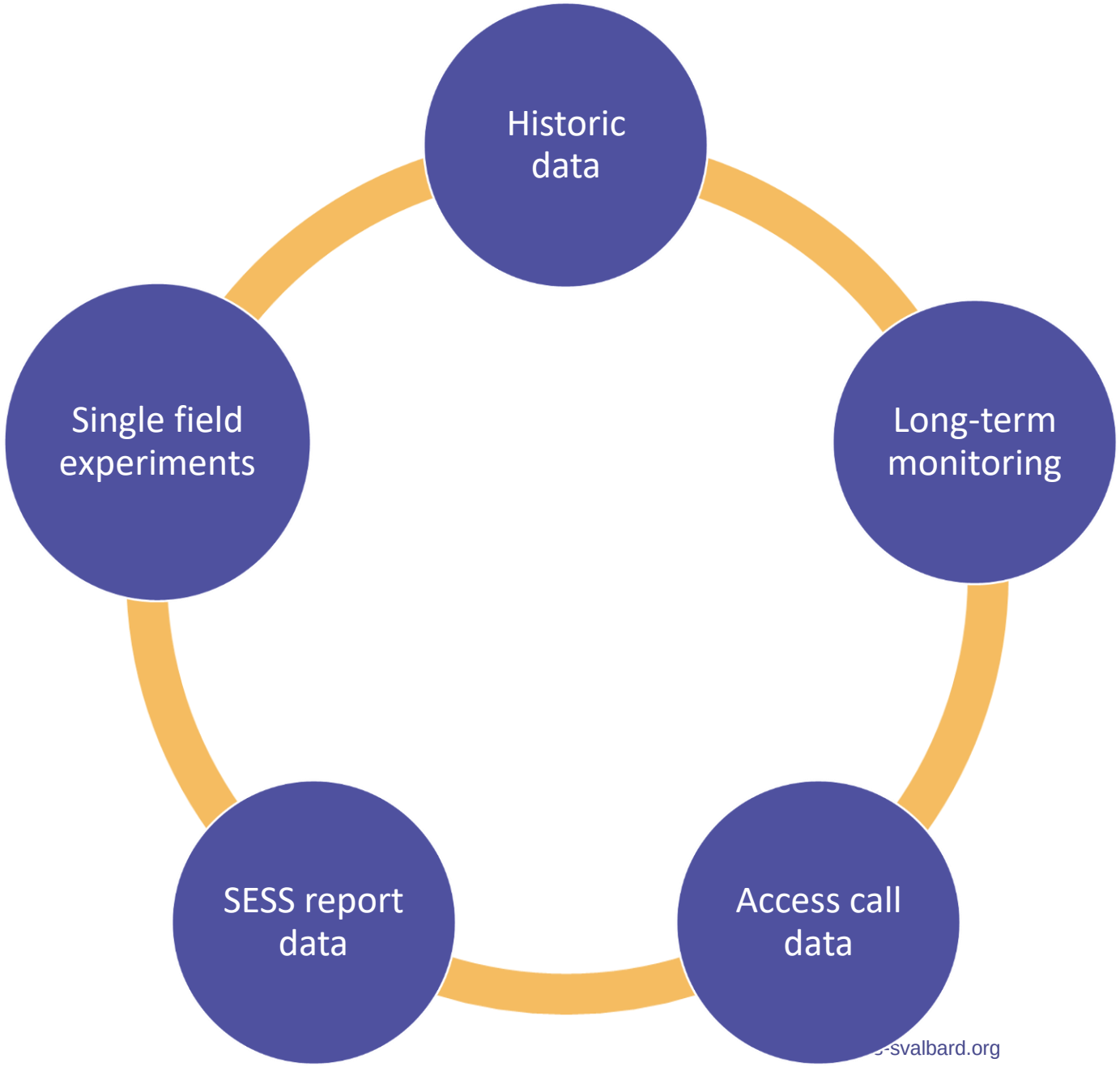
- A visible SIOS product
- Part of a long term SIOS strategy: the observational programme
- Guideline for SIOS development and projects



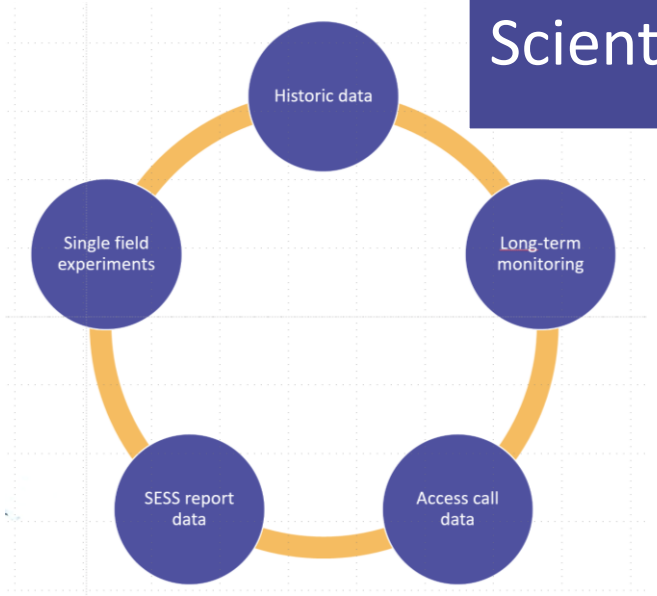
SIOS Data:

All data sets stored in or accessible through the SIOS data access point.

SIOS member's data sets, available or promised, but not yet accessible via SIOS data access point.



Criteria for SIOS Core Data

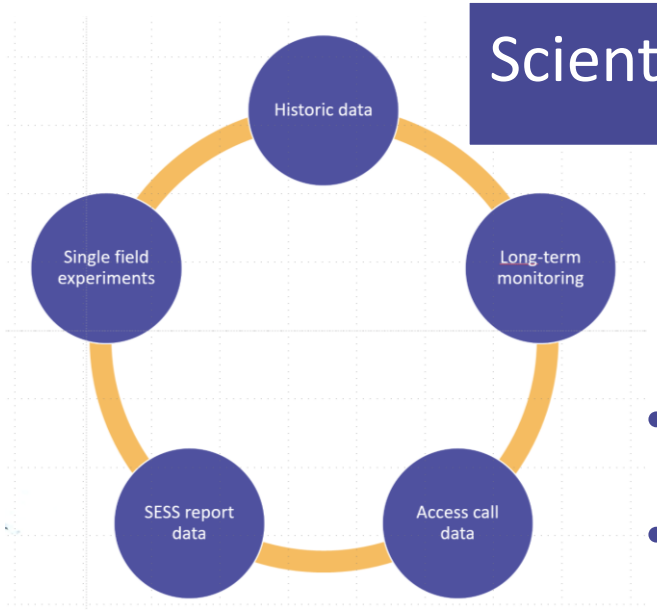


Scientific requirements

Members commitment

Data availability

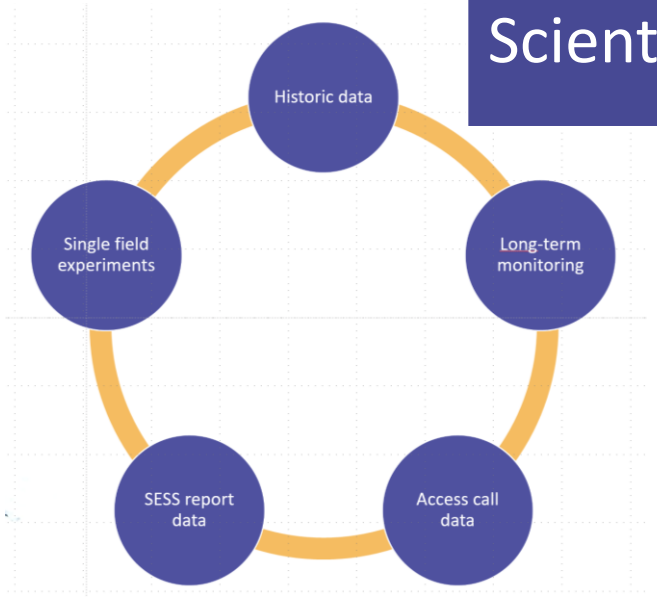
Criteria for SIOS Core Data



Scientific requirements

- answer the key research questions in Earth System Science (ESS)
- characterised by the Essential Climate Variables (ECVs) defined by The Global Climate Observing System (GCOS), WMO standards and the Global Change Master Directory (GCMD) Keywords
- identified by The Science Optimisation Advisory Group (SOAG)

Criteria for SIOS Core Data

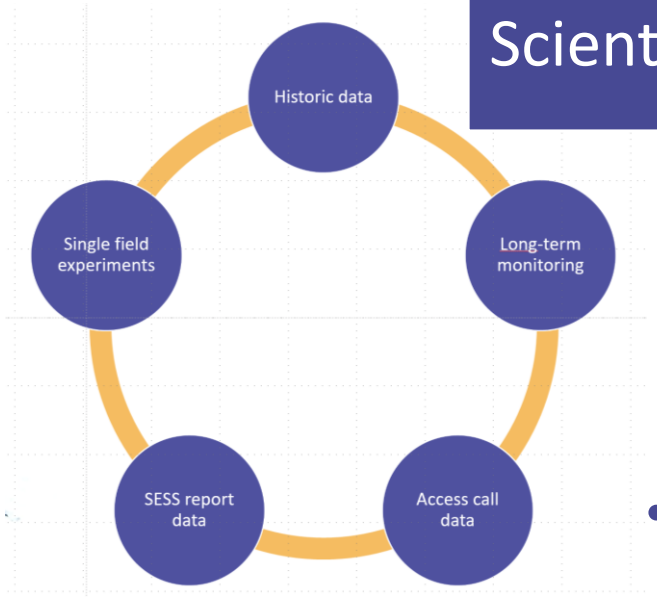


Scientific requirements

Members commitment

- Institutional commitment to maintain measurements for 5+ years

Criteria for SIOS Core Data



Scientific requirements

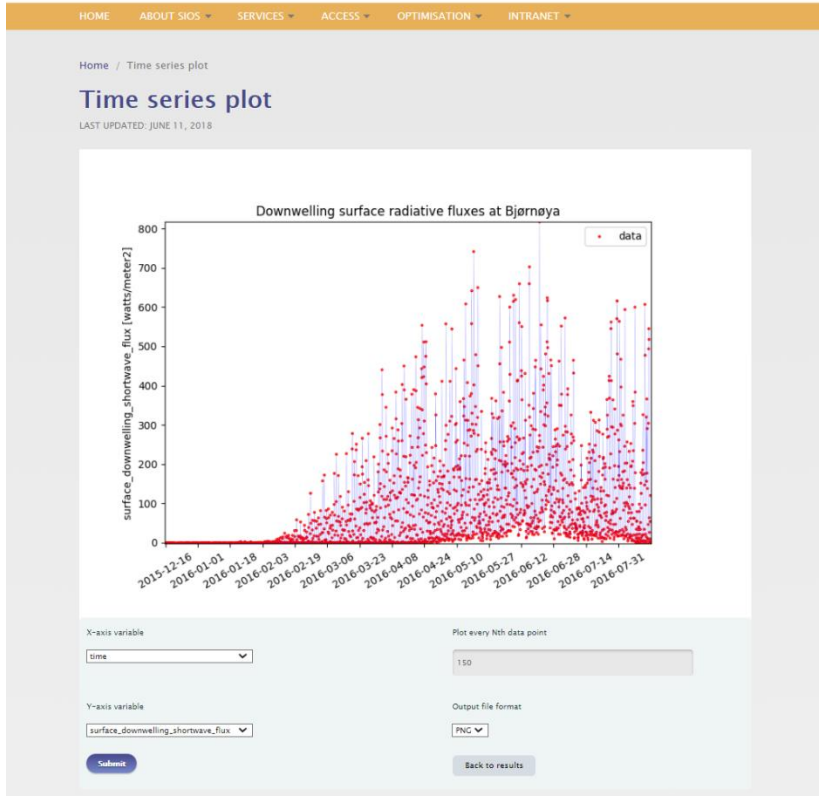
Members commitment

Data availability

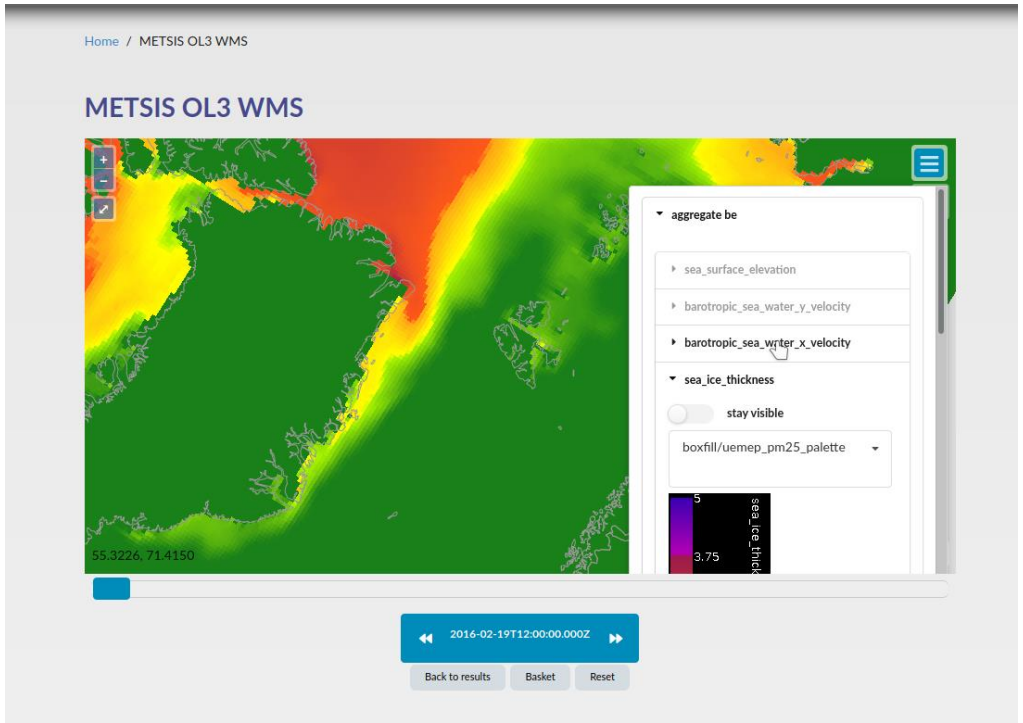
- SIOS core data should be available through SIOS Data Access Point
- Data must be described with rich metadata
- Institutional commitment to provide timely access to data

- **Open and free data sharing**
  - Open and free data sharing – WHY?
  - **<u>SIOS Data Access Point – WHERE?</u>**
  - Distributed data centres – HOW?
  - International standards

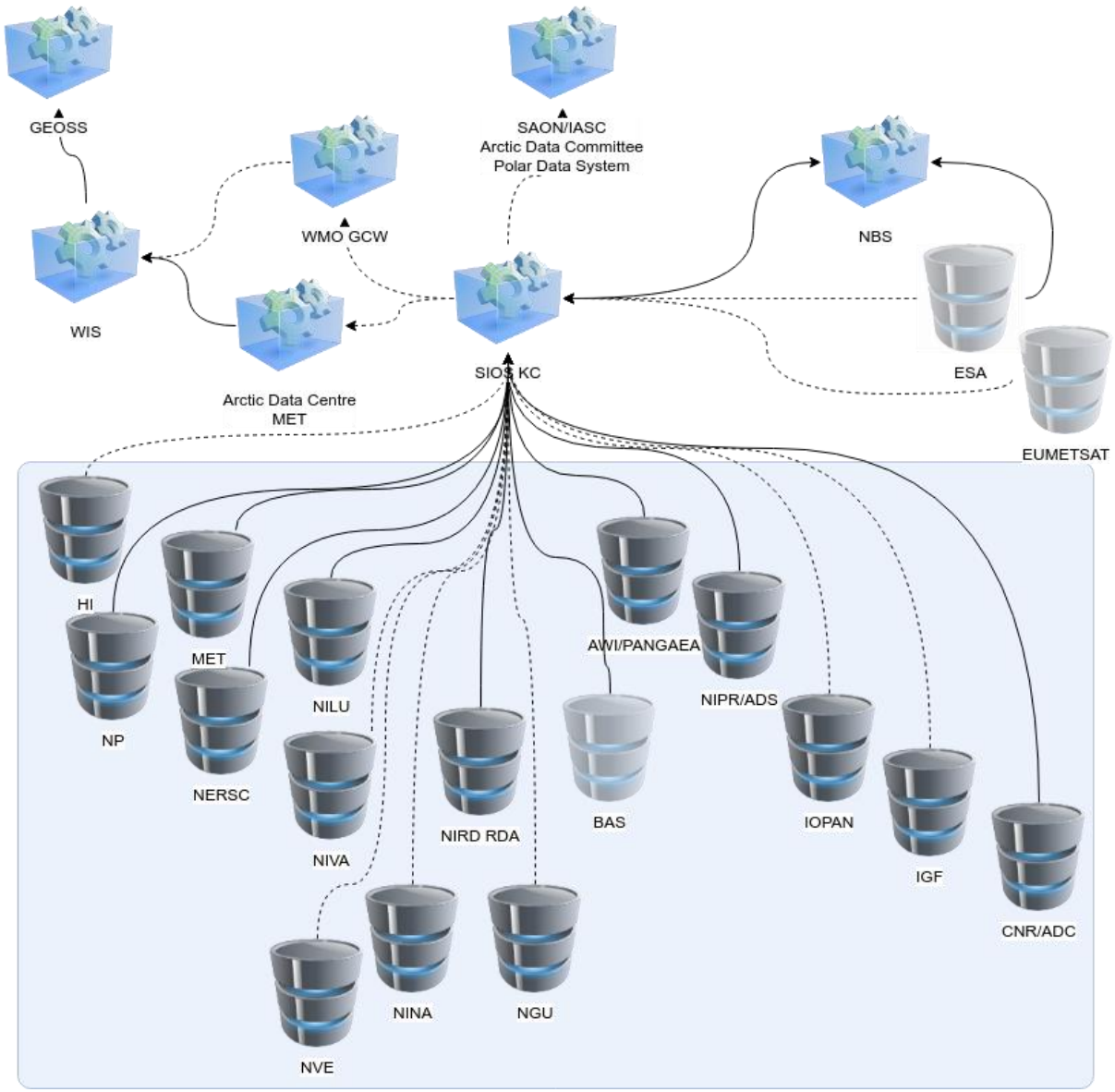
Services: Time Series plotting



Services: Visualization



- **Open and free data sharing**
  - Open and free data sharing – WHY?
  - SIOS Data Access Point – WHERE?
  - **<u>Distributed data centres – HOW?</u>**
  - International standards



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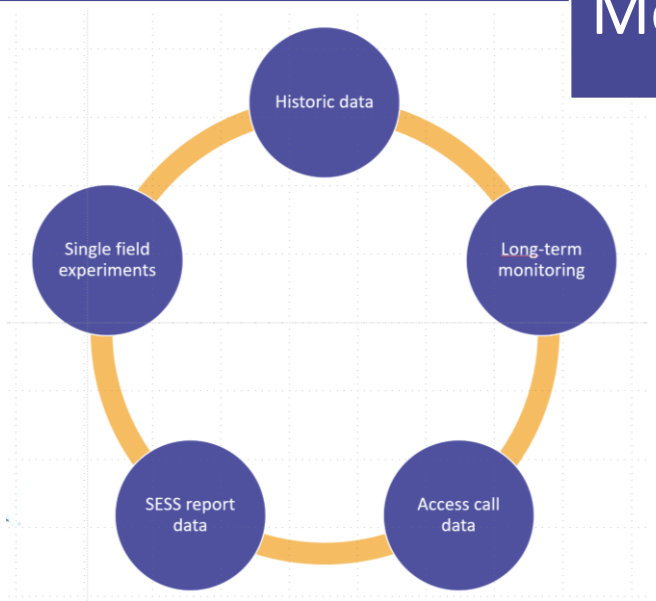
SIOS

Criteria for SIOS Core Data

Scientific requirements

Members commitment

Data availability

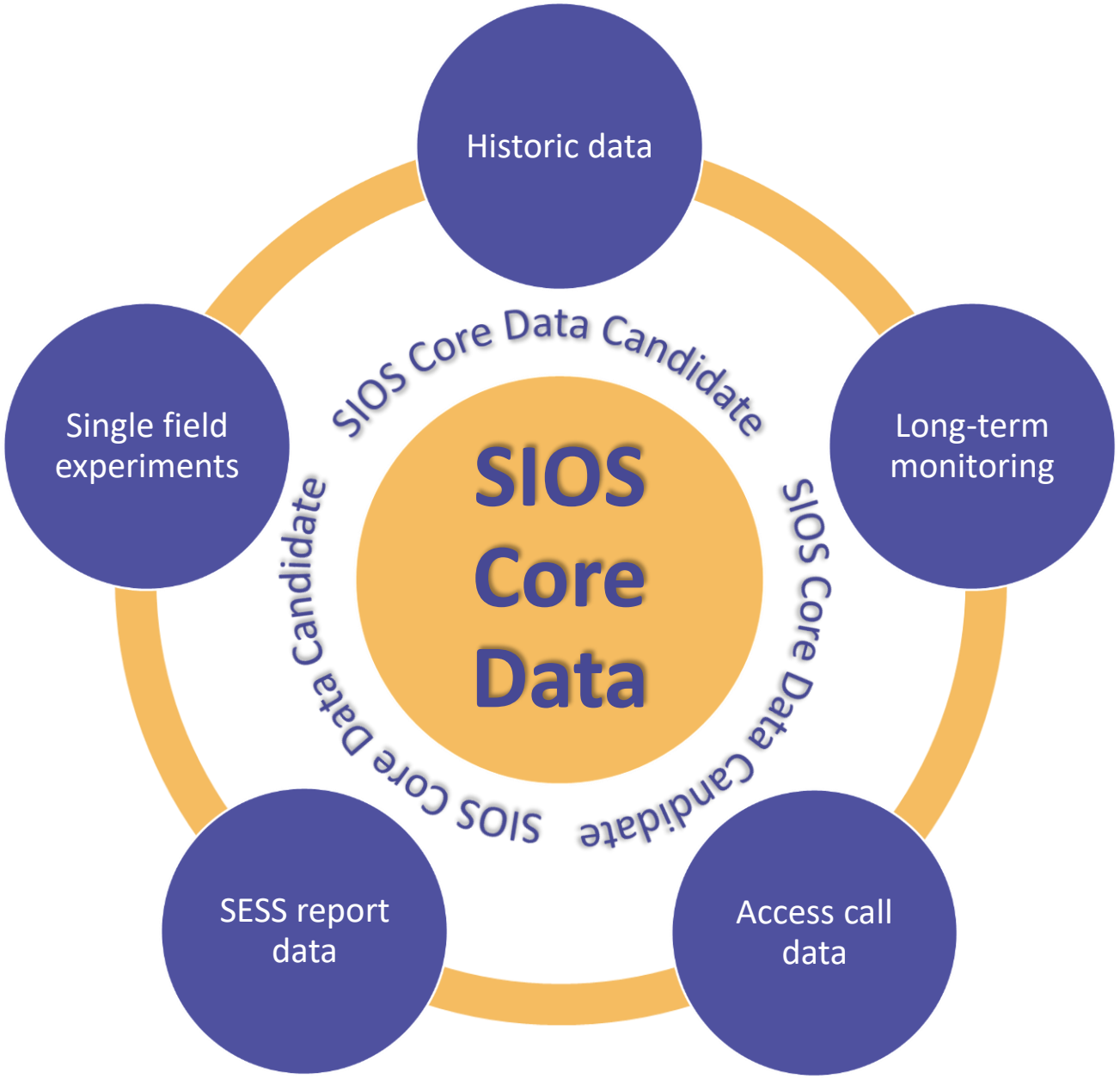


SIOS Core Data

SIOS Core Data:

SIOS data, which has passed special SIOS criteria.

Note: data not linked to the SIOS access point should not be qualified as SIOS Core Data



SIOS Core Data

SCD 1

ATMOSPHERE

SIOS Core Data

SCD 2

CRYOSPHERE

SIOS Core Data

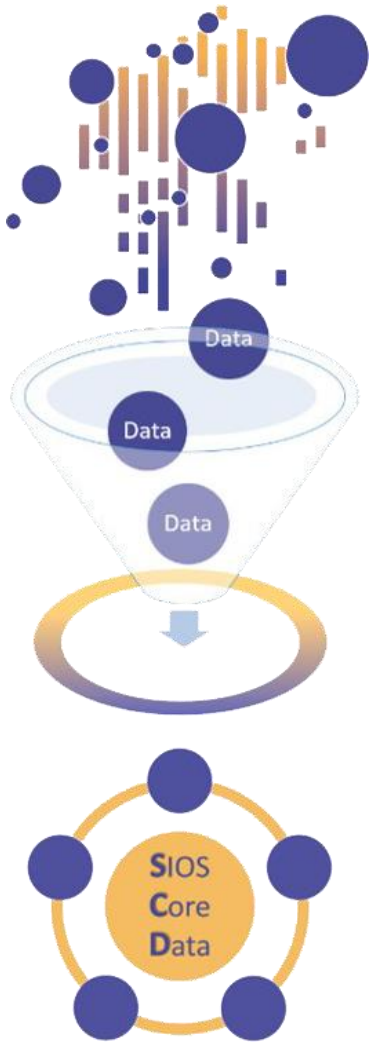
SCD 3

TERRESTRIAL

SIOS Core Data

SCD 4

OCEANS

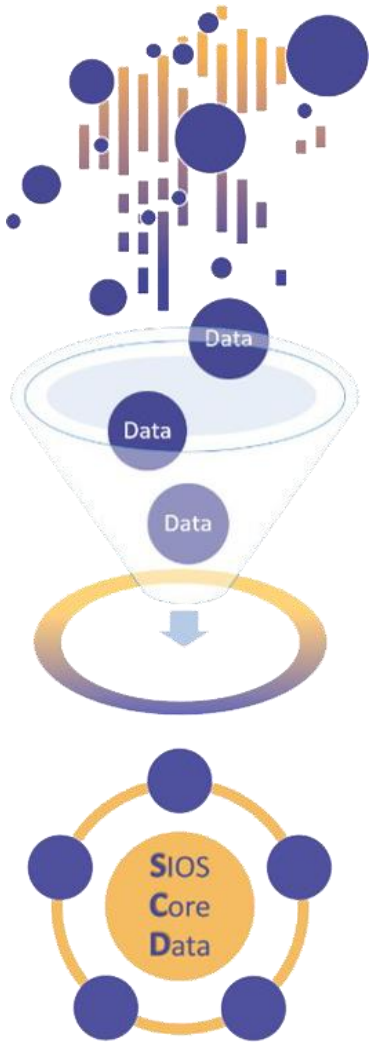


VARIABLES	SCD	SCD-C
SCD 1.1. WIND SPEED	YES	YES
SCD 1.2. WIND DIRECTION	YES	YES
SCD 1.3. AIR TEMPERATURE	YES	YES
SCD 1.4. NET RADIATION	YES	YES
SCD 1.5. SHORTWAVE RADIATION	YES	YES
SCD 1.6. LONGWAVE RADIATION	YES	YES
SCD 1.7. 24 HOUR PRECIPITATION AMOUNT	YES	YES
SCD 1.8. HUMIDITY	YES	YES
SCD 1.9. UPPER AIR TEMPERATURE	YES	YES
SCD 1.10. UPPER LEVEL WINDS	YES	YES
SCD 1.11. CLOUD TYPES	NO	YES
SCD 1.12. CLOUD HEIGHT	YES	YES
SCD 1.13. WATER VAPOR FLUX	NO	NO
SCD 1.14. CARBON DIOXIDE	YES	NO
SCD 1.15. NITROGEN DIOXIDE	YES	NO
SCD 1.16. OZONE	YES	NO
SCD 1.17. METHANE	YES	NO
SCD 1.18. AEROSOL OPTICAL DEPTH/THICKNESS	YES	YES
SCD 1.19. AEROSOL PARTICLE PROPERTIES	NO	YES
SCD 1.20. CHEMICAL COMPOSITION	NO	YES
SCD 1.21. CO2, FLUX	NO	NO
SCD 1.22. CH4, FLUX	NO	NO
SCD 1.23. AEROSOL IN SITU ABSORPTION	NO	YES
SCD 1.24. AEROSOL IN SITU SCATTERING	NO	YES
SCD 1.25. BLACK CARBON	NO	YES
SCD 1.26. U/V WIND COMPONENTS	NO	NO
SCD 1.27. TURBULENCE	NO	NO
SCD 1.28. VERTICAL WIND VELOCITY/SPEED	NO	YES
SCD 1.29. All-sky (630.0 nm, 557.7nm, 427.8 nm., cloud observa	NO	YES
SCD 1.3. Nem(F2), hm(F2) - Peak values ionosphere F2 layer	NO	NO
SCD 2.1. GLACIER MASS BALANCE	YES	YES
SCD 2.2. GLACIER ELEVATION	YES	YES
SCD 2.3. ICE VELOCITY	YES	YES
SCD 2.4. PERMAFROST TEMPERATURE	YES	YES
SCD 2.5. ACTIVE LAYER	NO	YES
SCD 2.6. PERMAFROST	NO	NO
SCD 2.7. GROUND ICE	NO	YES
SCD 2.8. SNOW DEPTH	YES	YES
SCD 2.9. SNOW WATER EQUIVALENT	NO	YES
SCD 2.10. SNOW COVER	YES	YES
SCD 2.11. SNOW/ICE TEMPERATURE	YES	YES
SCD 3.1. SOIL MOISTURE/WATER CONTENT	YES	YES
SCD 4.1. SEA SURFACE HEIGHT	NO	YES
SCD 4.2. SEA LEVEL RISE	NO	NO
SCD 4.3. OCEAN CURRENTS	YES	YES
SCD 4.4. SEA SURFACE TEMPERATURE	YES	YES
SCD 4.5. SALINITY	YES	YES
SCD 4.6. OCEAN HEAT BUDGET	NO	NO
SCD 4.7. SEA STATE	NO	NO
SCD 4.8. WATER TEMPERATURE	YES	YES
SCD 4.9. CHLOROPHYLL CONCENTRATIONS	YES	YES

51 variables classified as SIOS core data

Results of mapping:
20 of 24 partners can delivery the core data
15 of them delivered letter of commitment and information about the core data (SCD) and core data candidates (SCD-C)

29 of 51 variables are avaiable as SCD
37 of 51 variables are descibled as SCD-C



SIOS Core Data

SCD 1

ATMOSPHERE

29 variables

- ATMOSPHERIC WINDS
- ATMOSPHERIC TEMPERATURE
- ATMOSPHERIC RADIATION
- ATMOSPHERIC WATER VAPOR
- CLOUDS
- PRECIPITATION
- ATMOSPHERIC CHEMISTRY
- AEROSOLS

VARIABLES	SCD	SCD-C		ANDOYA	AWI	MET.NO	IGF	NCPOR	NIVA	NVE	UiB	UiO	IMR	INAR	NILU	POLAR.SE	NPI	NORCE
SCD 1.1. WIND SPEED	YES	YES		YES	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
SCD 1.2. WIND DIRECTION	YES	YES		YES	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
SCD 1.3. AIR TEMPERATURE	YES	YES		YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO
SCD 1.4. NET RADIATION	YES	YES		NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
SCD 1.5. SHORTWAVE RADIATION	YES	YES		NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
SCD 1.6. LONGWAVE RADIATION	YES	YES		NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
SCD 1.7. 24 HOUR PRECIPITATION AMOUNT	YES	YES		NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
SCD 1.8. HUMIDITY	YES	YES		YES	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
SCD 1.9. UPPER AIR TEMPERATURE	YES	YES		YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.10. UPPER LEVEL WINDS	YES	YES		YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.11. CLOUD TYPES	NO	YES		NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.12. CLOUD HEIGHT	YES	YES		NO	YES	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.13. WATER VAPOR FLUX	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

SIOS Core Data	GCOS hierarchical structure Domain / Subdomain / Observed Variables	GCMD hierarchical structure Term / Variable_Level_1 / Variable_Level_2	GCOS Definition	GCMD Definition
SCD 1.1. WIND SPEED	ATMOSPHERE / SURFACE / SURFACE WIND SPEED	ATMOSPHERIC WINDS / SURFACE WINDS / WIND SPEED	Speed of air at a known height above the surface which is to be specified in the metadata (m/s).	Ratio of the distance covered by the air to the time taken to cover it. The instantaneous speed corresponds to the case of an infinitely small-time interval. The mean speed corresponds to the case of a finite time interval. It is one component of wind velocity, the other being wind direction).
SCD 1.2. WIND DIRECTION	ATMOSPHERE / SURFACE / SURFACE WIND DIRECTION	ATMOSPHERIC WINDS / SURFACE WINDS / WIND DIRECTION	Direction from which wind is blowing at a known height above the surface which is to be specified in the metadata (degree true)	The direction from which the wind is blowing.
SCD 1.3. AIR TEMPERATURE	ATMOSPHERE / SURFACE / TEMPERATURE (NEAR SURFACE)	ATMOSPHERIC TEMPERATURE / SURFACE TEMPERATURE / AIR TEMPERATURE	Air temperature at a known height above surface, with the height specified in the metadata (K)	The temperature indicated by a thermometer exposed to the air in a place sheltered from direct solar radiation.

VARIABLES	SCD	SCD-C		ANDOYA	AWI	MET.NO	IGF	NCPOR	NIVA	NVE	UiB	UiO	IMR	INAR	NILU	POLAR.SE	NPI	NORCE
SCD 1.14. CARBON DIOXIDE	YES	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
SCD 1.15. NITROGEN DIOXIDE	YES	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
SCD 1.16. OZONE	YES	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
SCD 1.17. METHANE	YES	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
SCD 1.18. AEROSOL OPTICAL DEPTH/THICKNESS	YES	YES		NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
SCD 1.19. AEROSOL PARTICLE PROPERTIES	NO	YES		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO
SCD 1.20. CHEMICAL COMPOSITION	NO	YES		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
SCD 1.21. CO2, FLUX	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.22. CH4, FLUX	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.23. AEROSOL IN SITU ABSORPTION	NO	YES		NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO
SCD 1.24. AEROSOL IN SITU SCATTERING	NO	YES		NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
SCD 1.25. BLACK CARBON	NO	YES		NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO
SCD 1.26. U/V WIND COMPONENTS	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.27. TURBULENCE	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.28. VERTICAL WIND VELOCITY/SPEED	NO	YES		YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.29. All-sky (630.0 nm, 557.7nm, 427.8 nm., cloud observa	NO	YES		NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 1.3. Nem(F2), hm(F2) - Peak values ionosphere F2 layer	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

SIOS Core Data

SCD 2

CRYOSPHERE

- GLACIERS/ICE SHEETS
- SNOW/ICE
- FROZEN GROUND

VARIABLES	SCD	SCD-C		ANDOYA	AWI	MET.NO	IGF	NCPOR	NIVA	NVE	UiB	UiO	IMR	INAR	NILU	POLAR.SE	NPI	NORCE
SCD 2.1. GLACIER MASS BALANCE	YES	YES		NO	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES	NO
SCD 2.2. GLACIER ELEVATION	YES	YES		NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES
SCD 2.3. ICE VELOCITY	YES	YES		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES
SCD 2.4. PERMAFROST TEMPERATURE	YES	YES		NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 2.5. ACTIVE LAYER	NO	YES		NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 2.6. PERMAFROST	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 2.7. GROUND ICE	NO	YES		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
SCD 2.8. SNOW DEPTH	YES	YES		NO	YES	YES	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO
SCD 2.9. SNOW WATER EQUIVALENT	NO	YES		NO	YES	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO
SCD 2.10. SNOW COVER	YES	YES		NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
SCD 2.11. SNOW/ICE TEMPERATURE	YES	YES		NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES

SIOS Core Data

SCD 3

TERRESTRIAL

SOILS

VARIABLES	SCD	SCD-C		ANDOYA	AWI	MET.NO	IGF	NCPOR	NIVA	NVE	UiB	UiO	IMR	INAR	NILU	POLAR.SE	NPI	NORCE
SCD 3.1. SOIL MOISTURE/WATER CONTENT	YES	YES		NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

SIOS Core Data

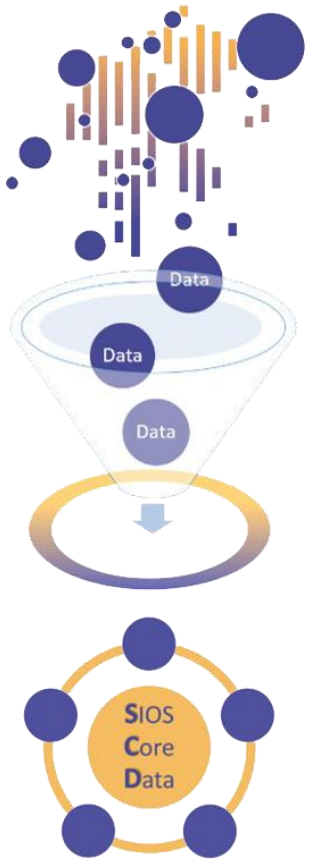
SCD 4

OCEANS

- SEA SURFACE TOPOGRAPHY
- COASTAL PROCESSES
- OCEAN CIRCULATION
- OCEAN TEMPERATURE
- SALINITY/DENSITY
- OCEAN HEAT BUDGET
- OCEAN WAVES
- OCEAN CHEMISTRY

VARIABLES	SCD	SCD-C		ANDOYA	AWI	MET.NO	IGF	NCPOR	NIVA	NVE	UiB	UiO	IMR	INAR	NILU	POLAR.SE	NPI	NORCE
SCD 4.1. SEA SURFACE HEIGHT	NO	YES		NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 4.2. SEA LEVEL RISE	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 4.3. OCEAN CURRENTS	YES	YES		NO	YES	NO	NO	YES	NO	NO	YES	NO	YES	NO	NO	NO	YES	NO
SCD 4.4. SEA SURFACE TEMPERATURE	YES	YES		NO	YES	NO	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	NO
SCD 4.5. SALINITY	YES	YES		NO	YES	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO	NO	YES	NO
SCD 4.6. OCEAN HEAT BUDGET	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 4.7. SEA STATE	NO	NO		NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SCD 4.8. WATER TEMPERATURE	YES	YES		NO	YES	NO	YES	YES	YES	NO	YES	NO	YES	NO	NO	NO	YES	NO
SCD 4.9. CHLOROPHYLL CONCENTRATIONS	YES	YES		NO	YES	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO

NEXT STEPS



NEXT STEPS

Tagging the datasets in the SIOS data access point

Variable	SIOS CORE DATA	Contact person (name, email)		If datasets aren't in the SIOS Data Access Point but are in the other data base please define:		Comments
		name	email	Database name	Link to the landing page (URL, DOI)	
SCD 4.3. OCEAN CURRENTS	YES	Arild Sundfjord	arild.sundfjord@nolar.no	Norwegian Polar Data Centre	https://data.npolar.no/dataset/73d0ea3a-fd21-4eab-8eb9-1e033fefcd8e	
SCD 4.4. SEA SURFACE TEMPERATURE	YES	Arild Sundfjord	arild.sundfjord@nolar.no	Norwegian Polar Data Centre	https://data.npolar.no/dataset/73d0ea3a-fd21-4eab-8eb9-1e033fefcd8e	We don't measure SST but SEA temperature

Variable	SIOS CORE DATA CANDIDATE	Contact person (name, email)		Comments
		name	email	
SCD 1.1. WIND SPEED	YES	Stephen Hudson	Stephen.Hudson@npolar.no	From Kongsfjorden glaciers, Norwegian Polar Data Centre
SCD 1.2. WIND DIRECTION	YES	Stephen Hudson	Stephen.Hudson@npolar.no	From Kongsfjorden glaciers, Norwegian Polar Data Centre

NEXT STEPS

SIOS core data report

SIOS Core Data (SCD): **ATMOSPHERE**

SCD 1.1. WIND SPEED

Reference to Essential Climate Variables (Global Climate Observing System GCOS)

Domain / Subdomain / Observed Variables ATMOSPHERE / SURFACE / SURFACE WIND SPEED

Reference to Global Change Master Directory (GCMD) Keywords

Term / Variable_Level_1 / Variable_Level_2 ATMOSPHERIC WINDS / SURFACE WINDS / WIND SPEED

SIOS Definition

SIOS Research Infrastructures and facilities where SCD 1.1 is collected

Weather station Bjørnøya
Weather station Edgeøya
Weather station Hopen
Weather station Hornsund
Weather station Isfjord Radio
Weather station Karl XII-øya
Weather station Kongsøya
Weather station Kvitøya
Weather station Ny-Ålesund
Weather station Pyramiden
Weather station Sørkappøya
Weather station Svalbard Airport
Weather station Sveagruva
Weather station Verlegenhuken
Weather station Akseløya

SIOS members institutions collecting SIOS Core Data

Links to search in DAP with institution name and tag: core data link: 'search results from DAP: GCMD_variable, institution_name; tag:coredata'

SIOS Core Data (SCD): **ATMOSPHERE**

SCD 1.1. WIND SPEED

Measurements	
Units:	Uncertainty:
Sampling period (aggregation, time step):	Quality control:
Measurements protocols:	Calibration protocols:
Distribution format:	

SIOS Research Infrastructures and facilities where SCD 1.1 is collected

Weather station Bjørnøya
Weather station Edgeøya
Weather station Hopen
Weather station Hornsund
Weather station Isfjord Radio
Weather station Karl XII-øya
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Weather station Sveagruva
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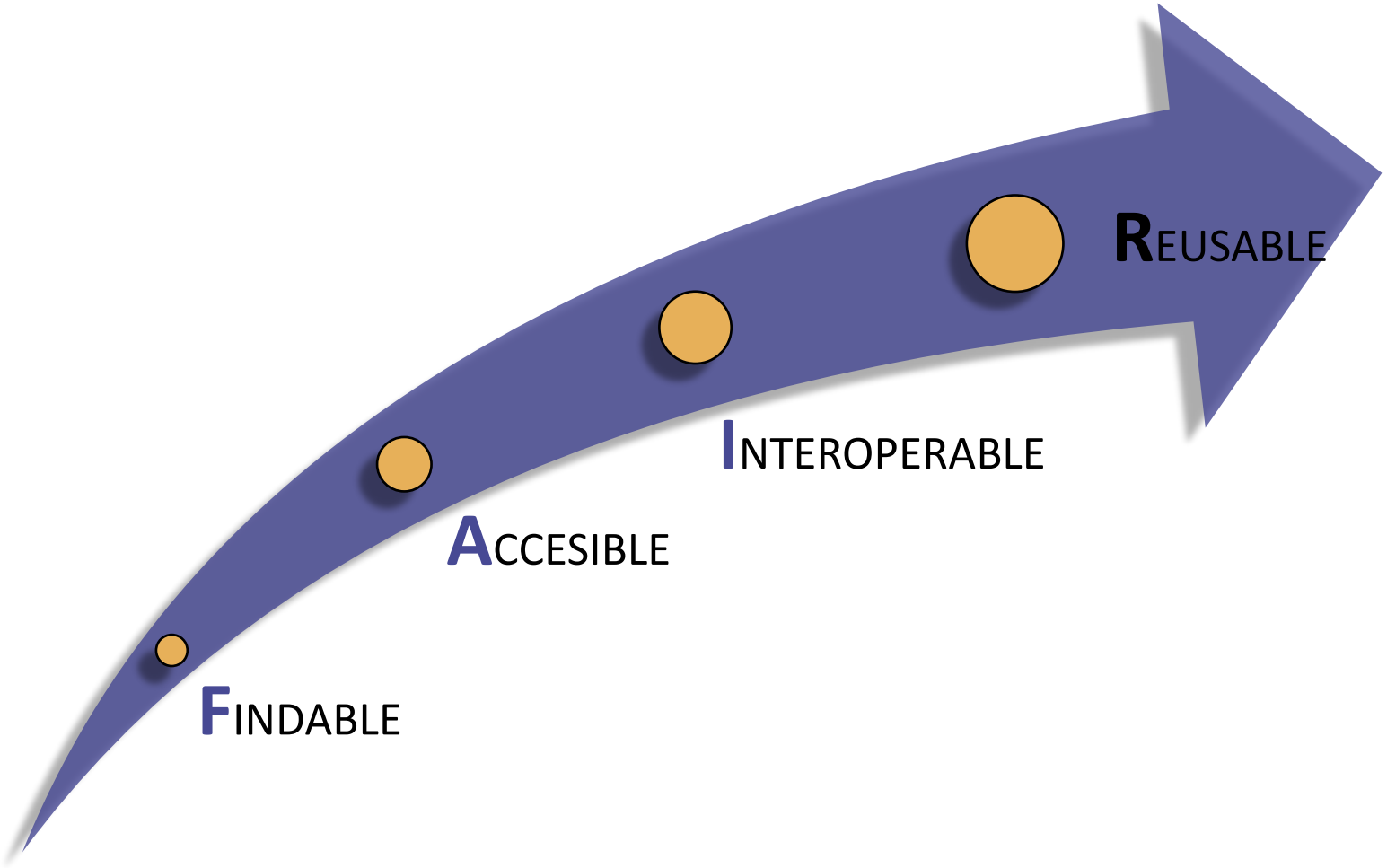
Weather station Akseløya

SIOS members institutions collecting Core Data

Links to search in DAP with institution name and tag: core data link: 'search results from DAP: GCMD_variable, institution_name; tag:coredata'

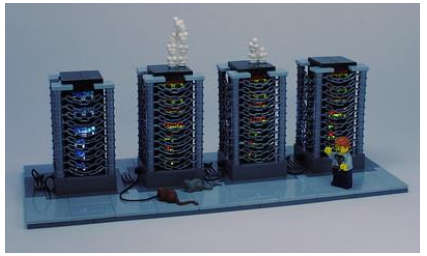
Make your data FAIR



SIOS

Measurements protocol
Metadata description
Persistent Identifiers

REUSABLE



Licenses and rights
Provenance

INTEROPERABLE

ACCESIBLE

FINDABLE

Data documentation
M2M
Data format standards
Authentication and authorization
Data Repositories

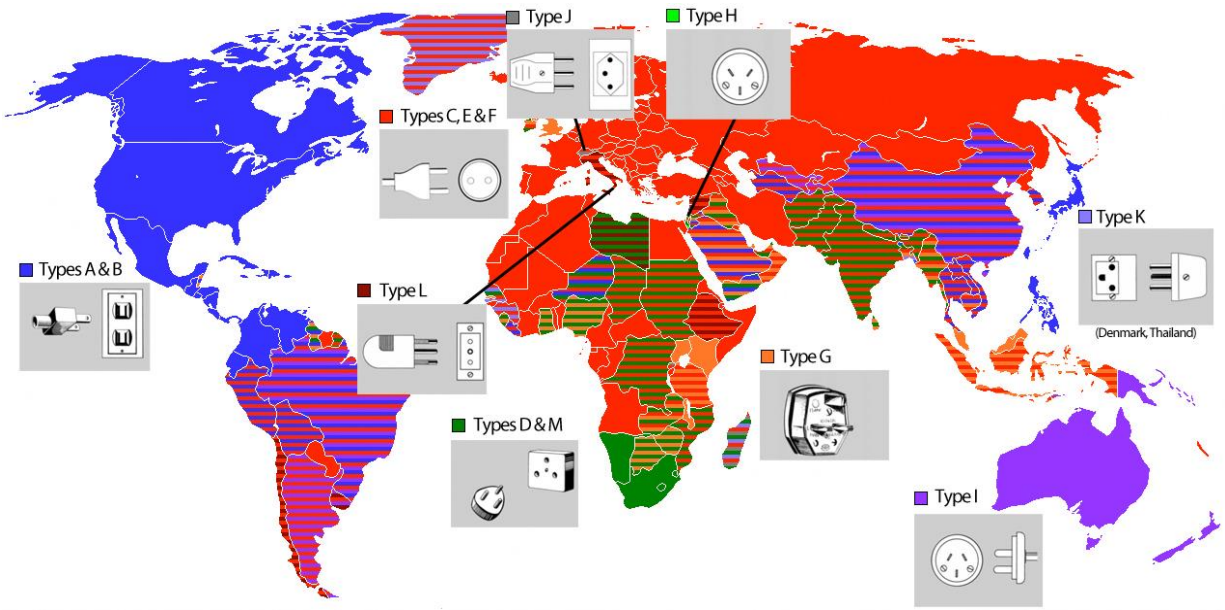
Benefits of standardisation

Makes life easier

- Promotes reuse of efforts

Promotes a common understanding of content

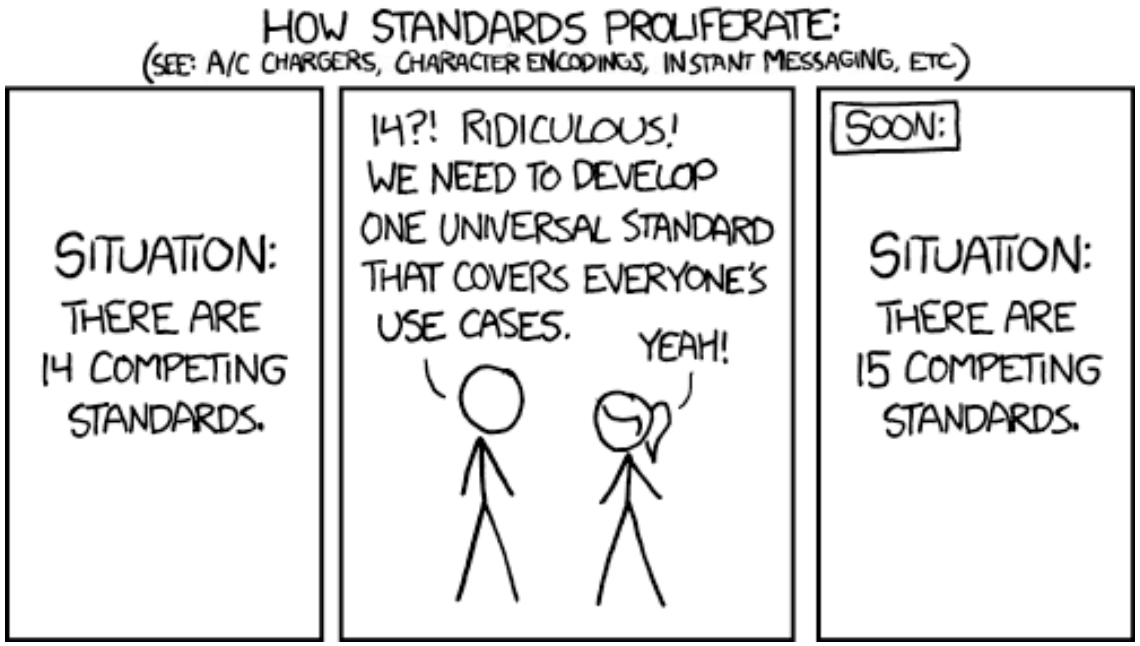
- Improves performance
- Reduce risk
- Promotes sustainability
- Encourage innovation
- Reduce cost
- Improve quality



From HobbyProjects

Why use community standards

- If you try to develop your data format from scratch, you will forget something.
- Build on the experience and improvements built into the community standards over years of use.
- Tools and analysis software natively support reading community standard data.
- Reduce development effort & support reuse.
- Positive feedback – they are more likely to be adopted by others.



http://xkcd.com/927/

Many hours have gone into developing standards for formats – try to learn from them.

Curt Tilmes, NASA, 2013 ESIP Material

SIOS Core Data Curation Call

SIOS supports the transformation of the datasets qualified during the core data mapping as SIOS Core Data candidates to the FAIR data.

SIOS aims to make the SIOS Core Data candidates available through SIOS Data Management System.

SIOS can support work on:

- Make SCD candidates FAIR data by checking data quality, describing metadata according to standards, converting data to a standard format and sharing data through an open repository.
- Establishing FAIR data documentation and interfaces. Supporting the data centres to implement lightweight interfaces through software developed centrally and deployed using Docker.

SIOS Core Data Curation Call

SIOS supports the transformation of the datasets qualified during the core data mapping as SIOS Core Data candidates to the FAIR data.

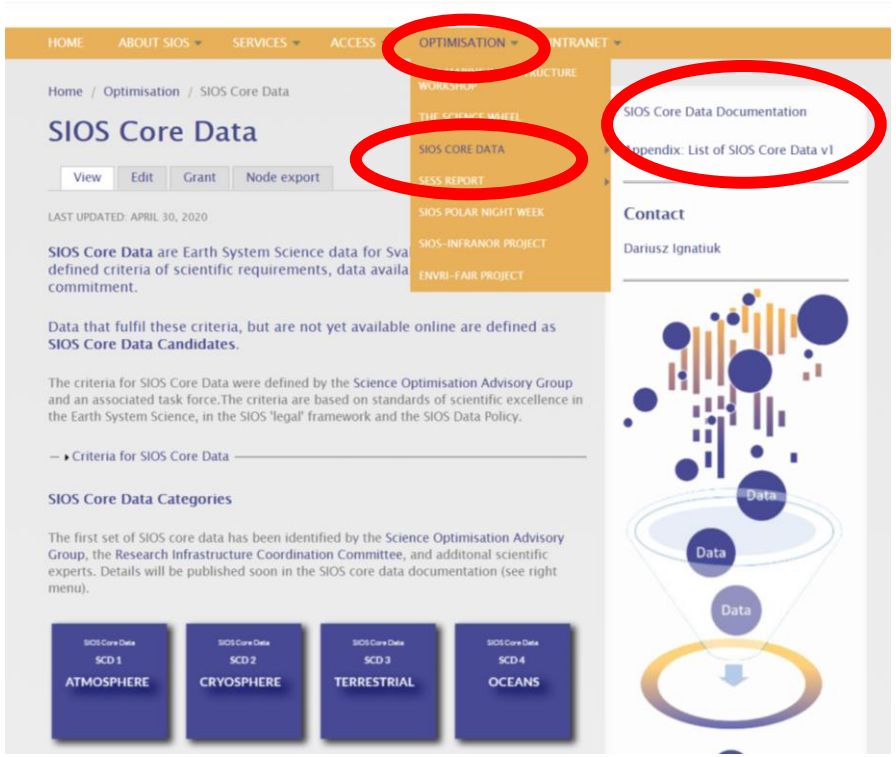
Who can apply?

Employees from SIOS member institution may apply, provided they meet the criteria outlined below.

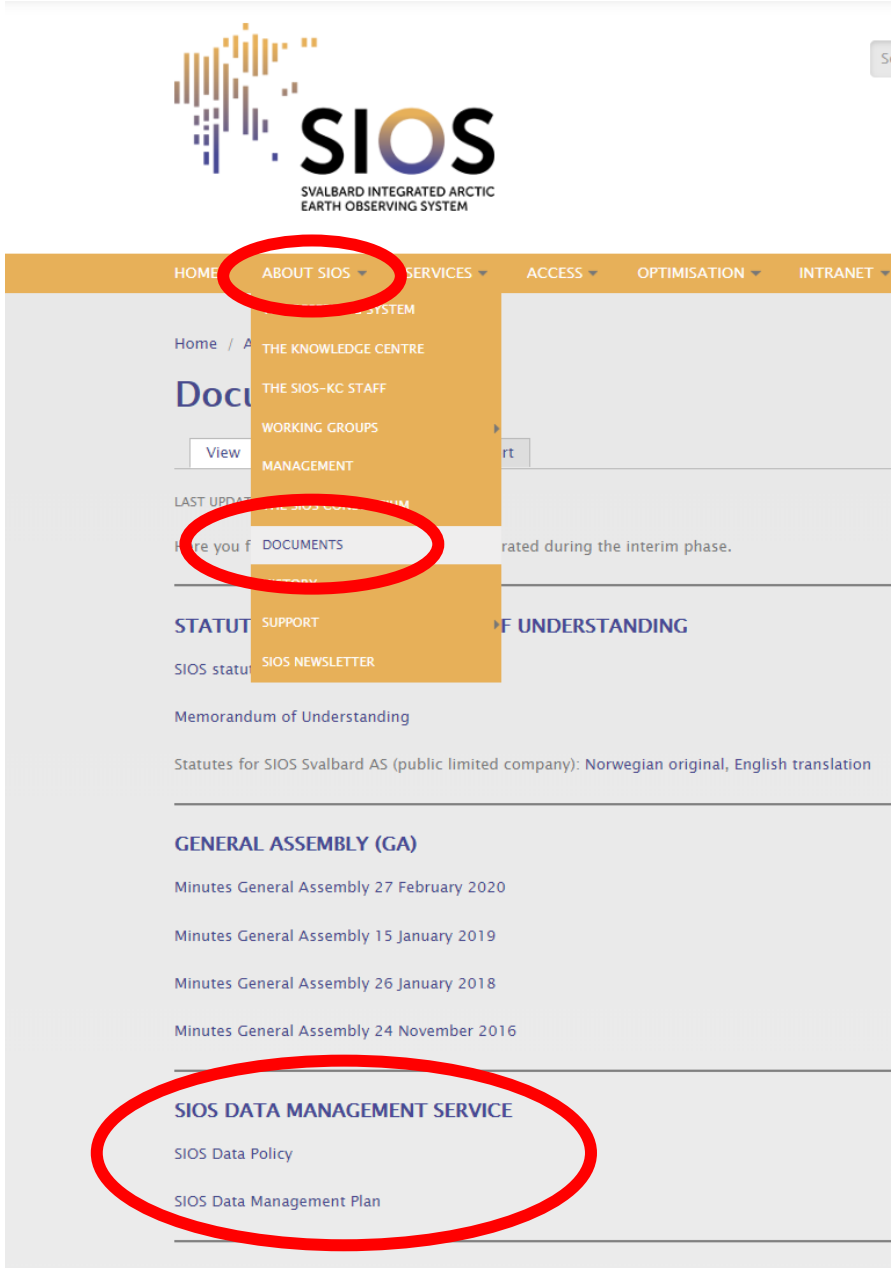
Eligibility criteria

Applicants must meet the following eligibility criteria to be considered:

- The datasets that will be proposed for transformation to SIOS Core Data (SCD) must be on the list of SIOS Core Data candidates for the applying institution (LINK).
- Proposals must be in line with the SIOS Core Data strategy (https://sios-svalbard.org/sites/sios-svalbard.org/files/common/CoreData_Documentation.pdf).
- Applicants must be able to adhere to SIOS data policy (www.sios-svalbard.org/Documents).
- Proposals must be in line with the SDMS Interoperability Guidelines (https://github.com/SIOS-Svalbard/SDMSInteroperabilityGuidelines).
- Commitment to provide datasets as SCD in the following years in a standard developed thanks to this application.
- In case of establishing an interface for data sharing, maintaining the system for the next 5 years.
- Data must be accessible by SIOS data portal.



SIOS core data Documentation



SIOS Data Policy
SIOS Data Management Plan

Evaluation of the core data set.

Solitary measurements that need no one else and are not used by anyone else should not be considered as SIOS core data.