

The Arctic SDI

Arctic Spatial Data Infrastructure

- A circumpolar initiative -

Fredrik Persäter
LANTMÄTERIET



Peter Pouplier



Danish Ministry of the Environment
Danish Geodata Agency





The purpose with the Arctic SDI is...

...to increase the use and utility of Arctic data provided to politicians, governments, policy makers, scientists, private enterprises and citizens in the Arctic

By developing a standardized infrastructure for datasharing including Arctic geographical reference data and digital maps based on data from national agencies of the 8 Arctic nations.

Short history - background

2007 Yellowknife Declaration - GeoNorth Conference

2009 Formal **Arctic Council support** – SAO meeting

2011 the **Arctic SDI Cooperation** was launched by the **8 National Mapping Agencies** together with Arctic Council WG **CAFF** - Sweden and Norway PMG

2014 **Memorandum of Understanding** signed, new governance, commitment to responsibilities and resources





National Contact Points	Secretariat	Communication	Strategy 2015-2022	Operational Policies	Technical Working Group	Cloud & Cascading Service	Geoportal	Activities
CAN	CAN	NOR	USA, FIN	DEN	SWE	NOR	FIN	Lead Countries
CAN, DEN, FIN, ICE, NOR, RUS, SWE, USA	DEN, NOR, SWE	CAN, DEN, ICE, SWE	CAN, DEN, FIN, ICE, NOR, RUS, SWE, USA	CAN, USA	CAN, DEN, FIN, ICE, NOR, RUS, SWE, USA	FIN, SWE	NOR, SWE	Supporting Countries



PROJECT FRAMEWORK

- Project phases

Establishing Phase 2011/2014

- Memorandum of Understanding
- Simplified Governance
- Reference Model
- Working Groups Stood-up

Structuring Phase 2010/2011

- Arctic Council Links
- Project Management
- Technical Group
- Steering Committee

Operational Phase 2014/2015

- NMA Data
- WMS service
- Geoportal
- SDI - CAFF Data
- SDI Strategy View
- SDI Communications
- SDI Operational Policies
- SDI Technical / Standards

SDI Engagement Phase 2015/2020

- Leverage Global/National SDI Communities
- Stakeholder Engagement and Requirements
- From Strategy to Roadmap to Projects
- Resource Allocations
- Performance Metrics
- Standards Coordination

2014 – status

- ❖ Geoportal
- ❖ Web Map Service with Reference Data 1:250.000
- ❖ CAFF thematic data
- ❖ Strategic Plan 2015 – 2020
- ❖ Senior Arctic Official - invitation to start dialogue with all Arctic Council Working Groups





Arctic SDI Dataflow





Arctic SDI - Architecture

Dataflow



Geoportal and Applications

Transport Layer (Internet)

Integration layers for common services

Geospatial Digital Rights Management

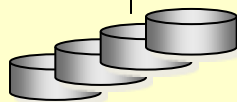
Services Services Services Services

Service layers based on open standards

Services Services Services

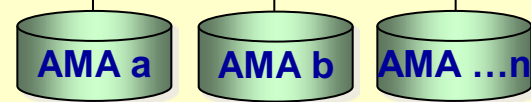
Service layers

Thematic Data



Other Data Providers

National reference data



Arctic Mapping Agencies





Action



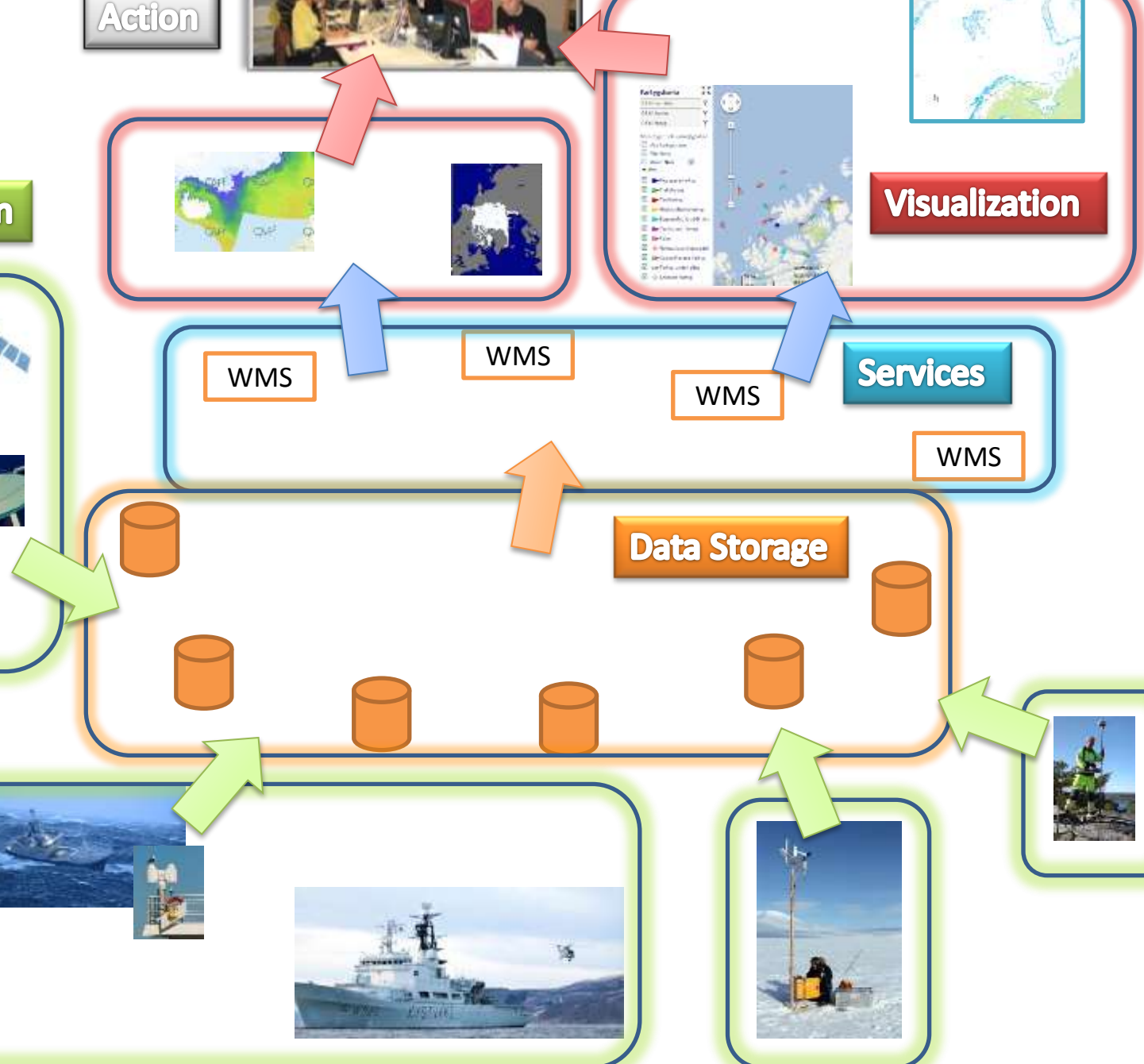
Visualization

Data Collection

Services

WMS WMS WMS WMS

Data Storage

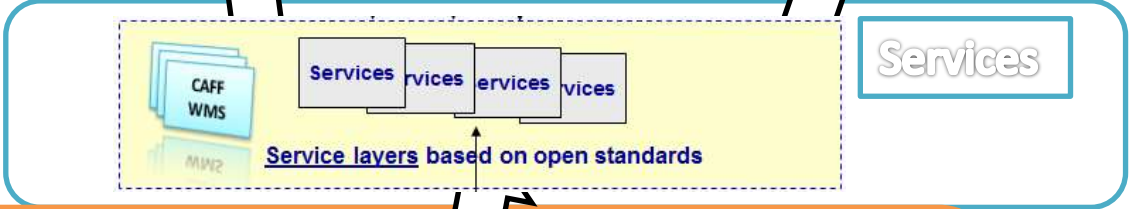
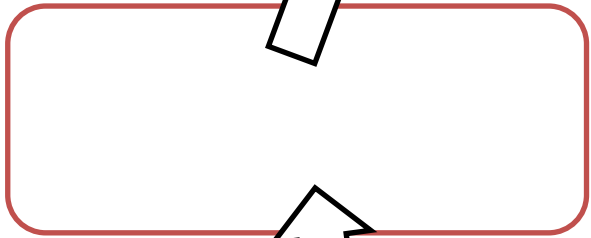




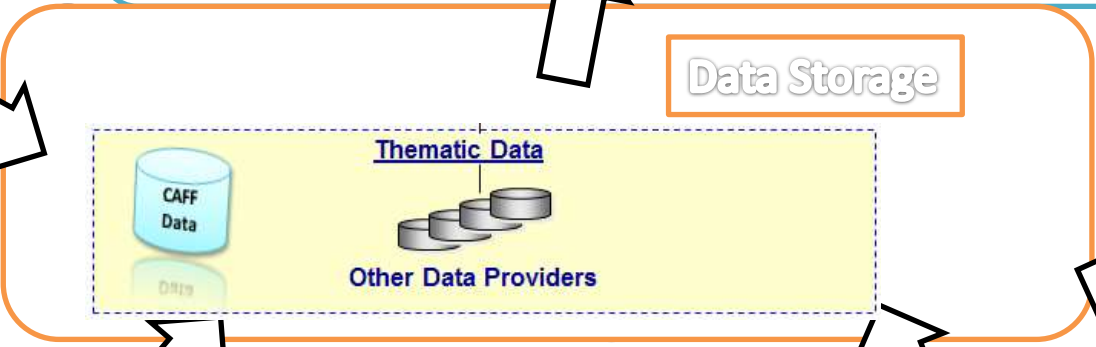
Action



Visualization

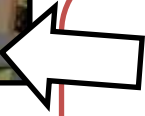
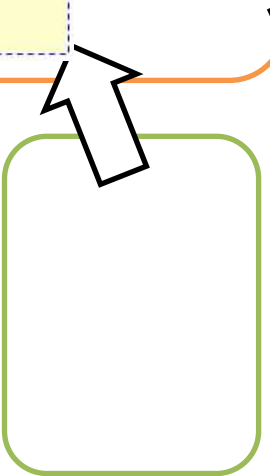
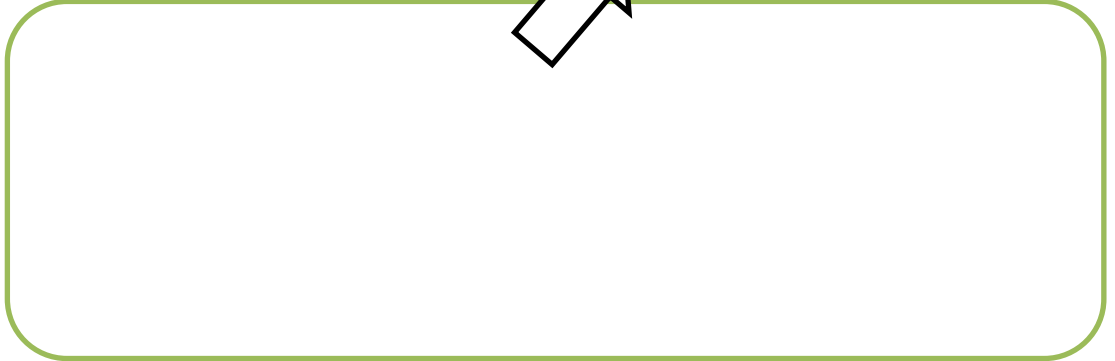
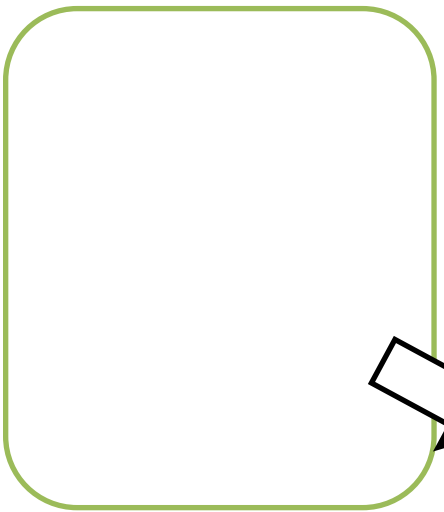


Services



Data Storage

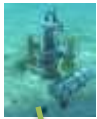
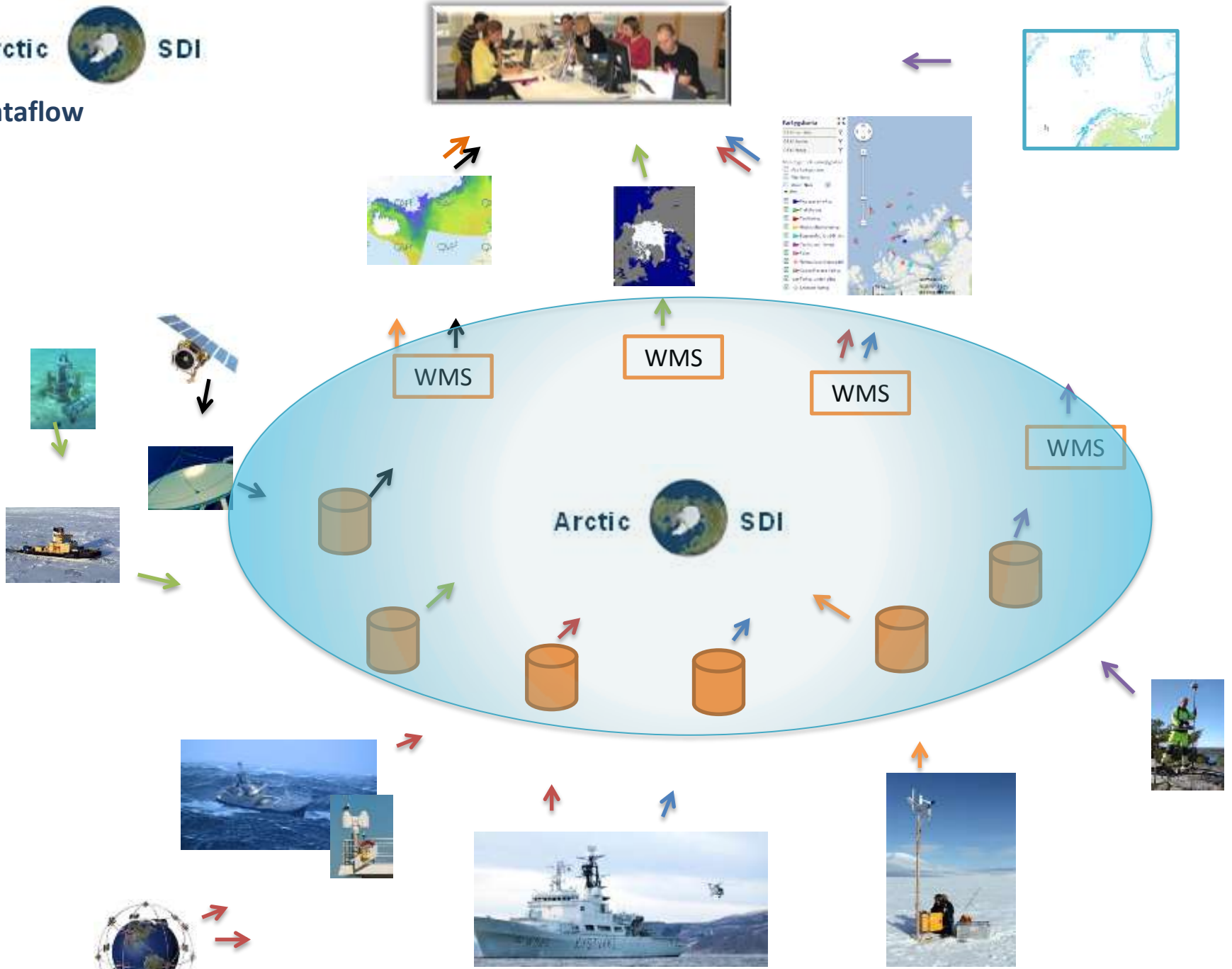
Data Collection





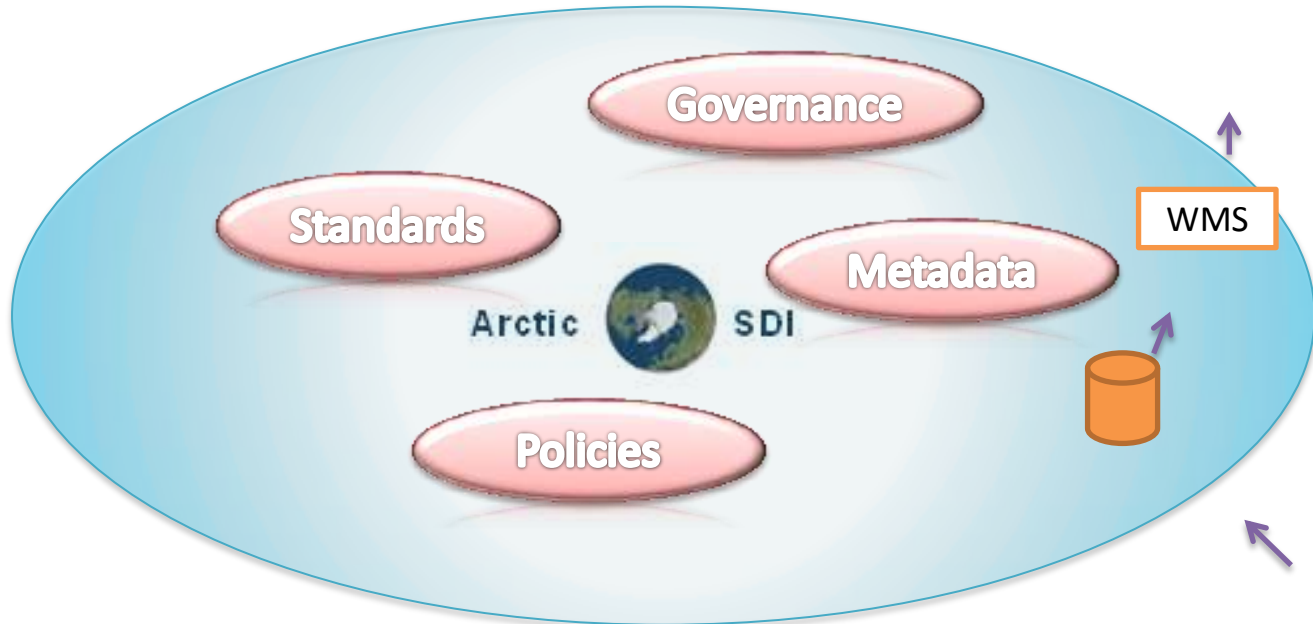
WMS





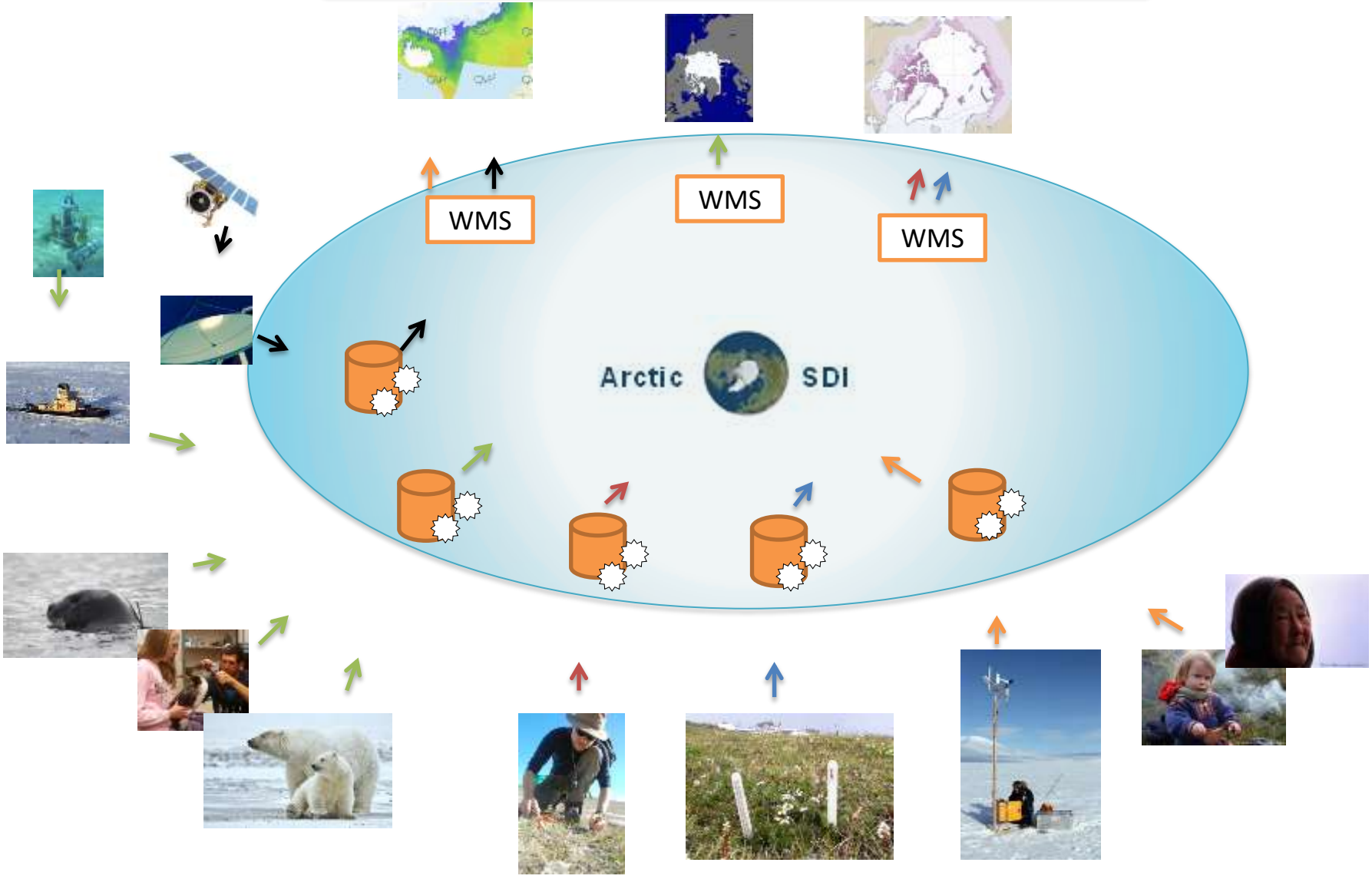


Main responsibility Arctic Mapping Agencies





Contribution from Arctic Council WG's



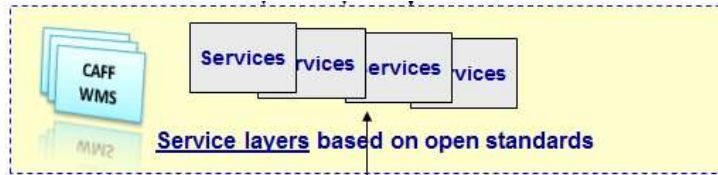
CAFF and Arctic SDI

Dataflow

Arctic SDI Geoportal

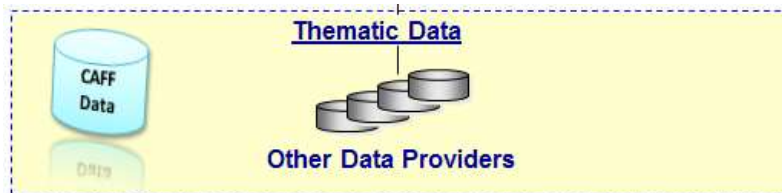


Visualization



Services

Data Storage



Map Layers

By Theme

By Data Provider

Search map layers.

Search map layers by the name of the map layer, the name of the data producer or the keyword describing the map layer. [i](#)

▶ ASDI (1)

▼ CAFF (8)

- CAFF Albedo ● <
- CAFF CDOM ● <
- CAFF Chlorophyll ● <
- CAFF LandCoverType ● <
- CAFF PrimaryProductivity ● <
- CAFF SeaSurfaceTemperature ● <
- CAFF SnowCoveredArea ● <
- CAFF Vegetation ● <

North Pole LAEA Europe
N: -2607908
E: -1508903

50 km
20 mi

North Pole LAEA Europe
N: -2611673
E: -1560986

Search

Location Search

Metadata Search

Search Results

[Edit search options](#)

Name

- Boundary for Conservation of Arctic Flora and Fauna (CAFF) working group of the Arctic Council, CAFF [i](#) [x](#)
- Lichen Arctic regions, CAFF [i](#) [x](#)
- Sites of existing river biotic and abiotic data in the CAFF designated zone, CAFF [i](#) [x](#)
- Boundaries of the geographic area covered by the Arctic Biodiversity Assessment, CAFF [i](#) [x](#)
- Arctic Terrestrial mammals - distribution by broad geographic region and low or high arctic zones, CAFF [i](#) [x](#)
- CBMP Arctic Marine Areas, CAFF [i](#) [x](#)
- Large Marine Ecosystems (LMEs) of the Arctic - 2012, CAFF [i](#) [x](#)
- Terrestrial monitoring sites as identified in CBMPs terrestrial monitoring plan, [i](#) [x](#)

SEARCH

MAP LAYERS

SELECTED LAYERS 1

MY DATA

MAP PUBLISHING



Username

Password

Log in

50 km
20 mi



The Arctic SDI

- primary stakeholders -

- ❖ Arctic Council & it's Working Groups: CAFF, EPPR, PAME, AMAP
- ❖ Institutions and organizations managing Arctic data

What will the Mapping Institutions offer ?

- ❖ The Arctic SDI - the infrastructure - is an efficient system for presentation and for interoperability data
- ❖ The Arctic SDI can be used for visualizing the work of the Arctic Council and for multiplying the effect of producing data



What is your role in an Arctic SDI ?

- ❖ Provide digital access to your thematic data and metadata
- ❖ Manage your data according to international standards for data sharing
- ❖ Demand the standards to be applied by your partners when they produce or distribute your data

- ❖ Thank You for your attention!
- ❖ We look forward to cooperate
- ❖ arctic-sdi.org