

# The Arctic SDI

## Arctic Spatial Data Infrastructure

- A circumpolar initiative -

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# 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

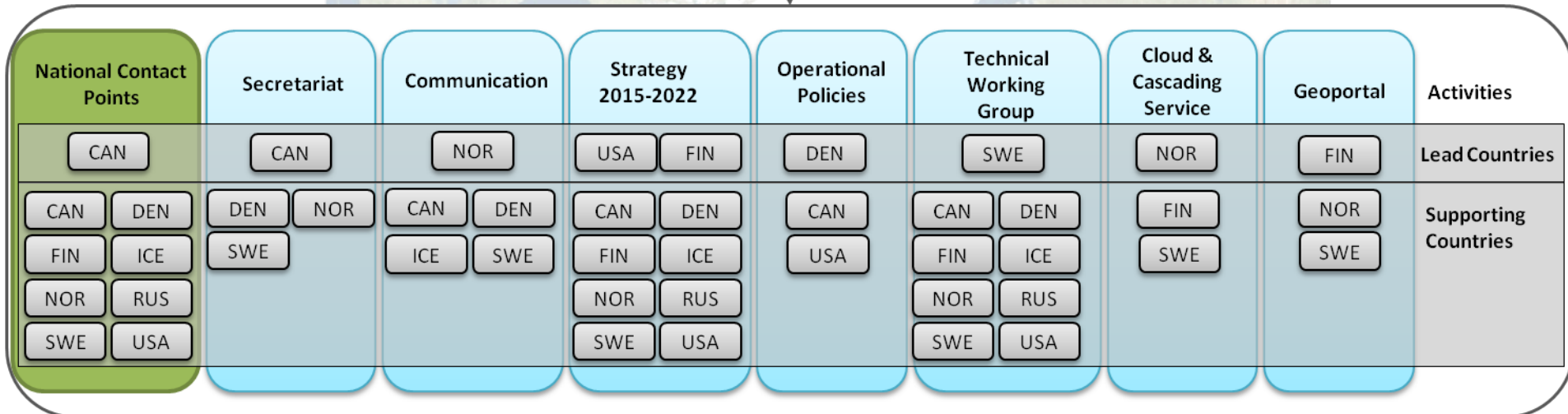
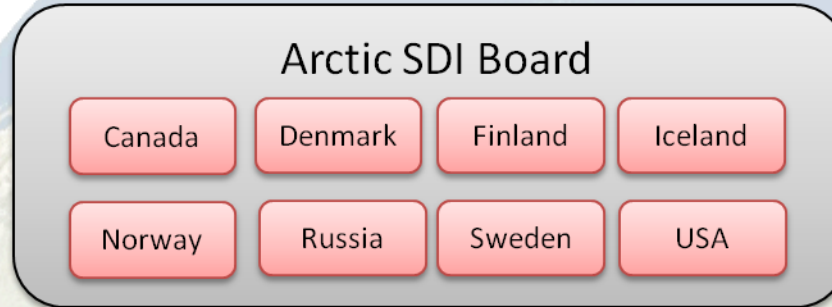
2007 Yellowknife Declaration - GeoNorth Conference

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







# 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**

**Service layers based on open standards**

CAFF  
WMS

WMS  
CAFF

**Services**

**Services**

**Services**

**Service layers**

**Thematic Data**

**Other Data Providers**

**National reference data**

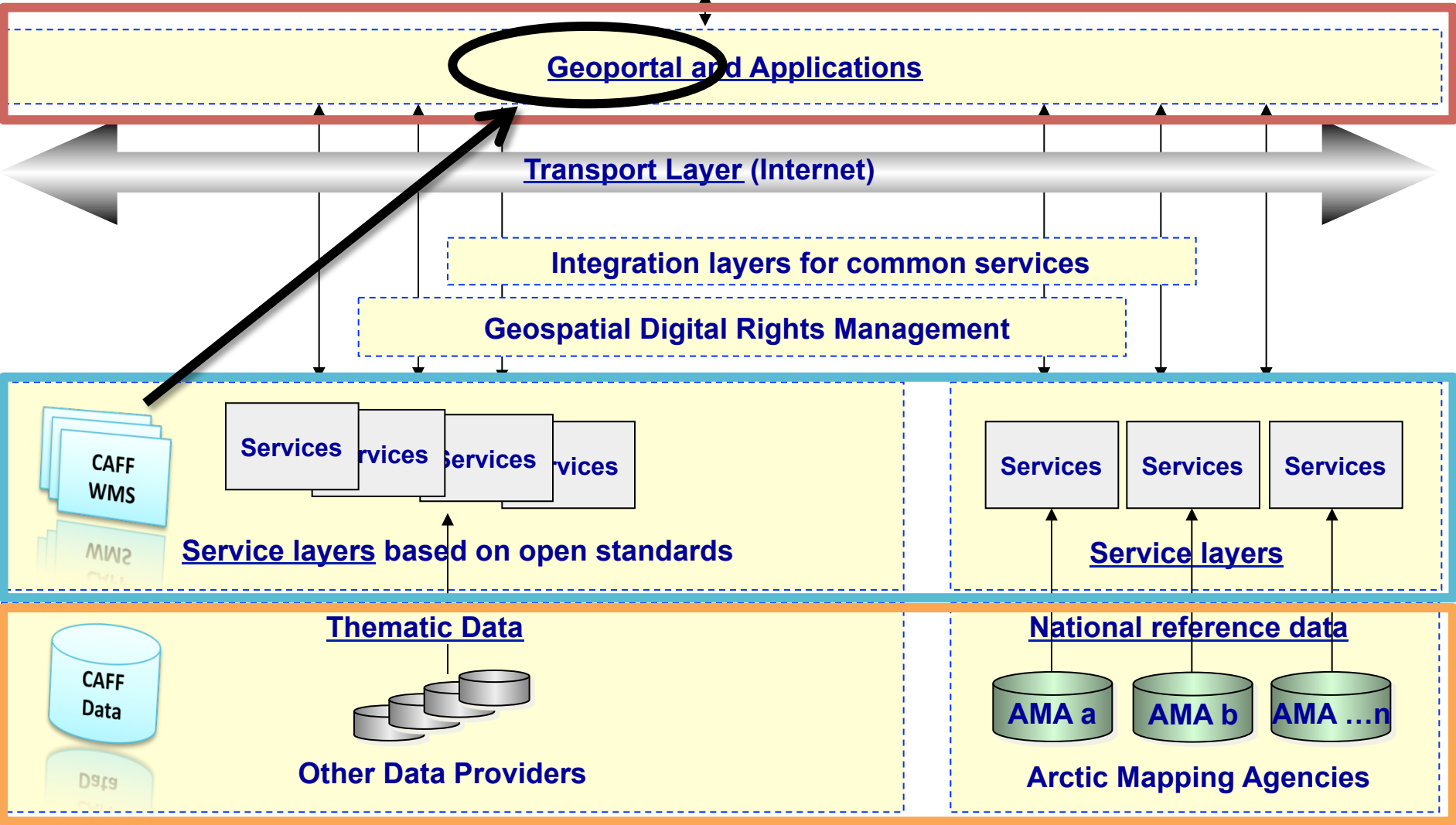
**Arctic Mapping Agencies**

CAFF  
Data

AMA a

AMA b

AMA ...n





Action



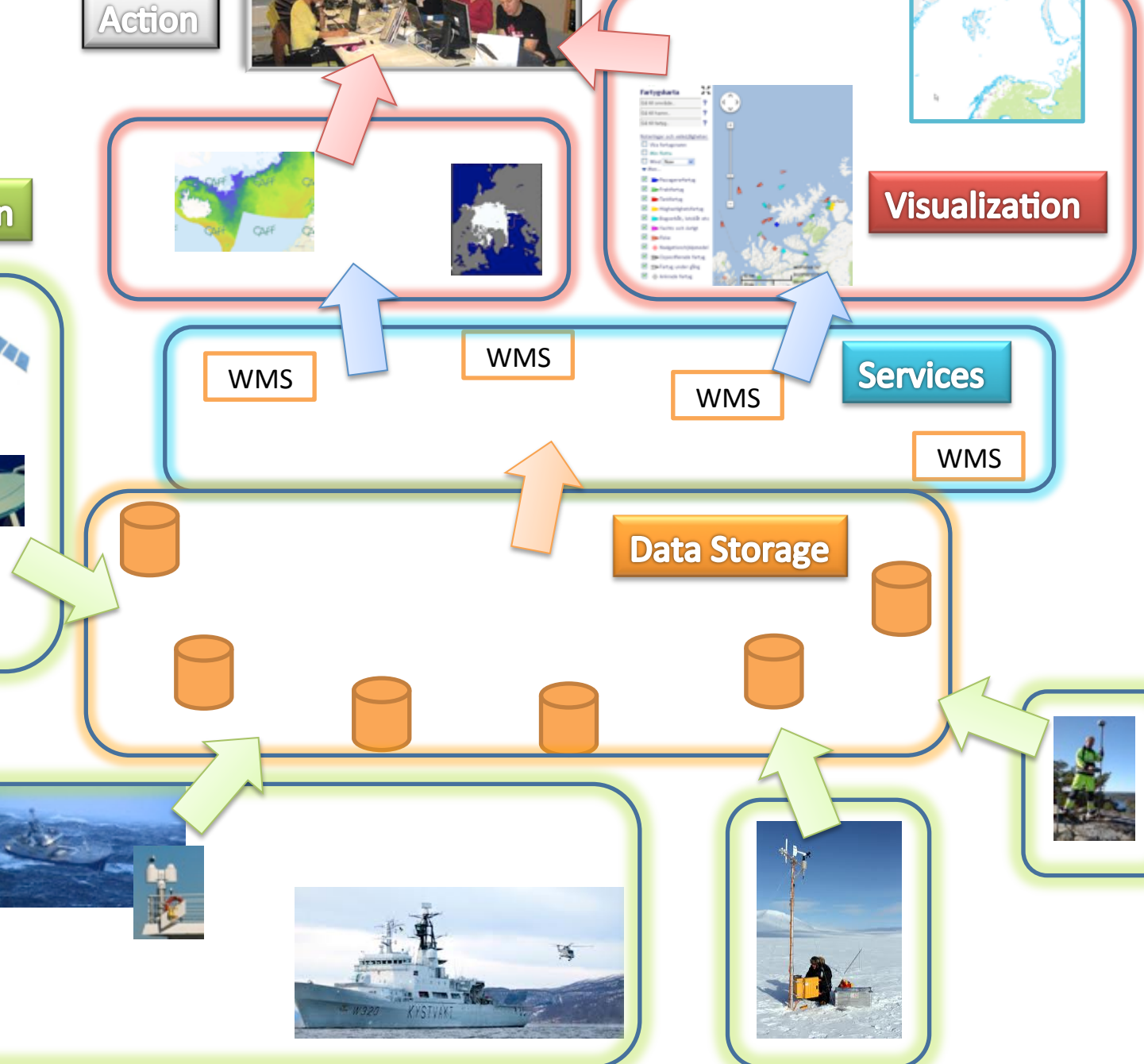
Visualization

Data Collection

Services

WMS WMS WMS WMS

Data Storage

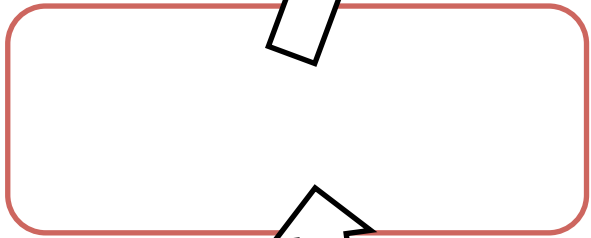




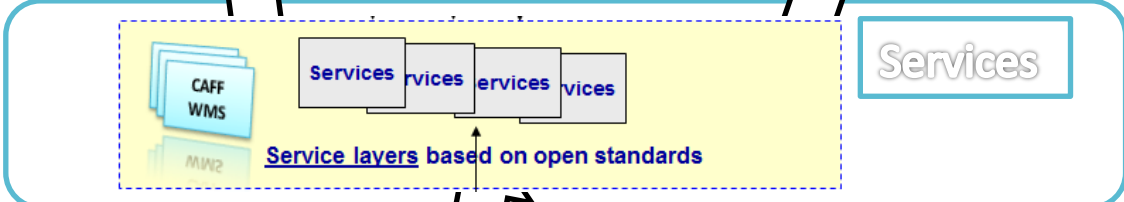
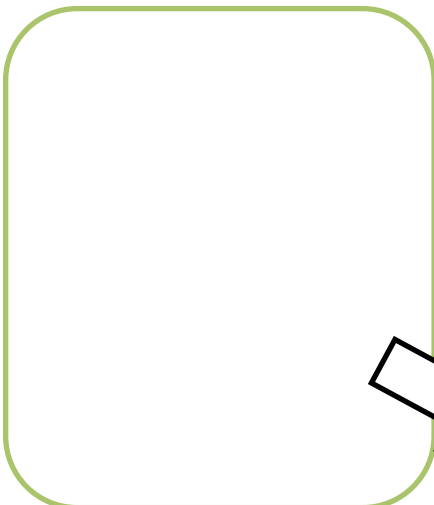
Action



Visualization



Data Collection

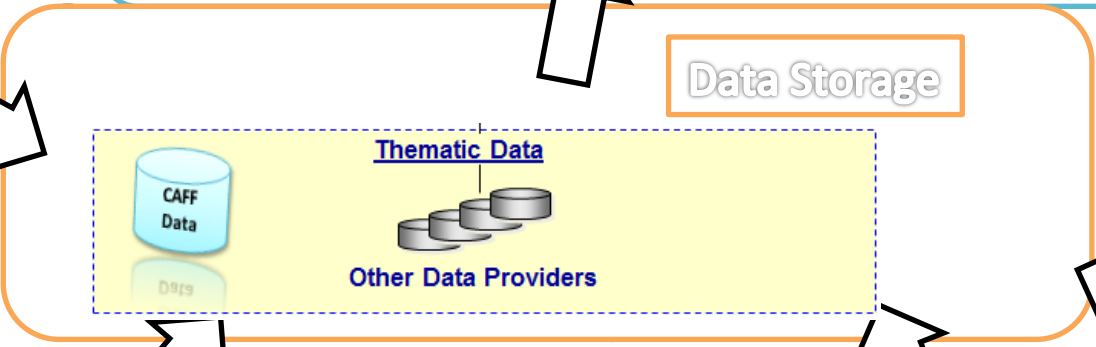


Services

CAFF WMS

Services services services vices

Service layers based on open standards

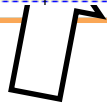
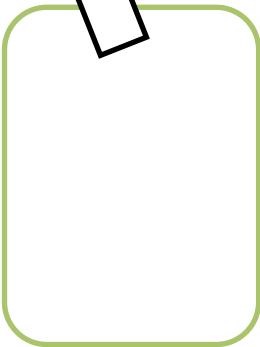
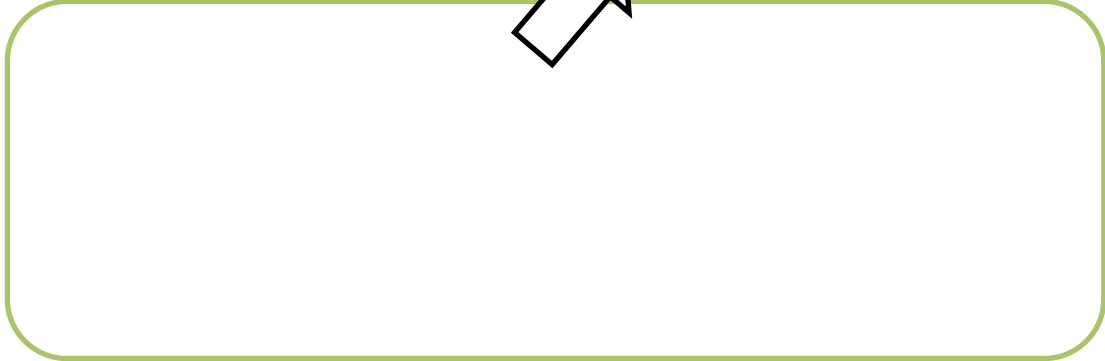


Data Storage

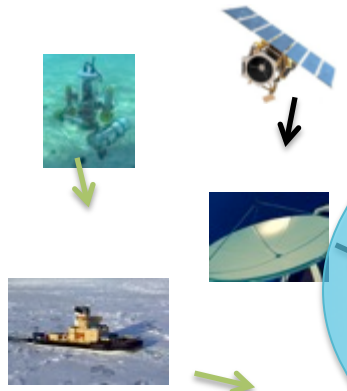
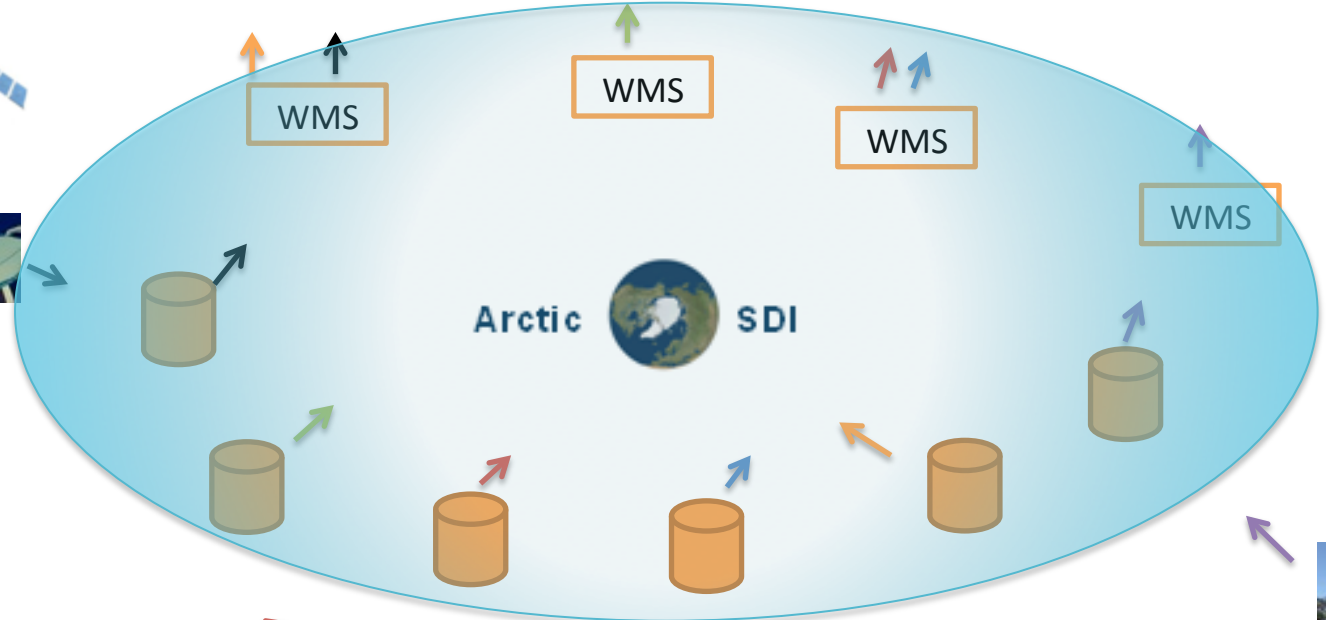
CAFF Data

Thematic Data

Other Data Providers

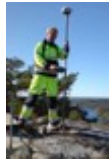
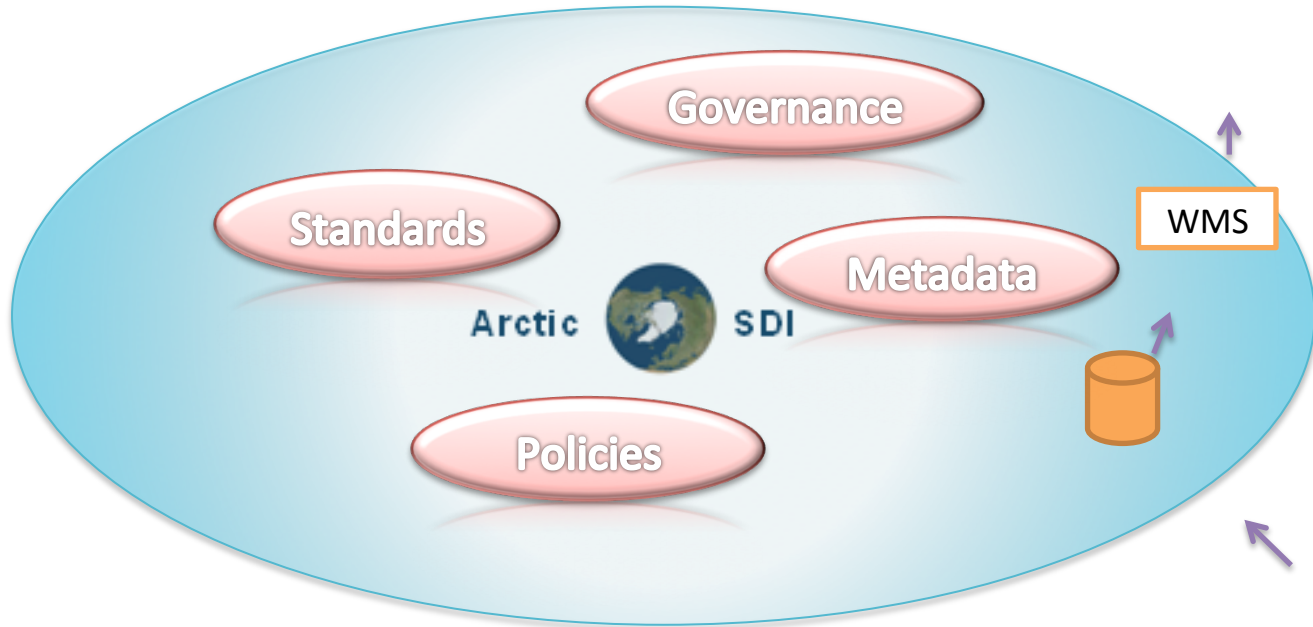








# Main responsibility Arctic Mapping Agencies



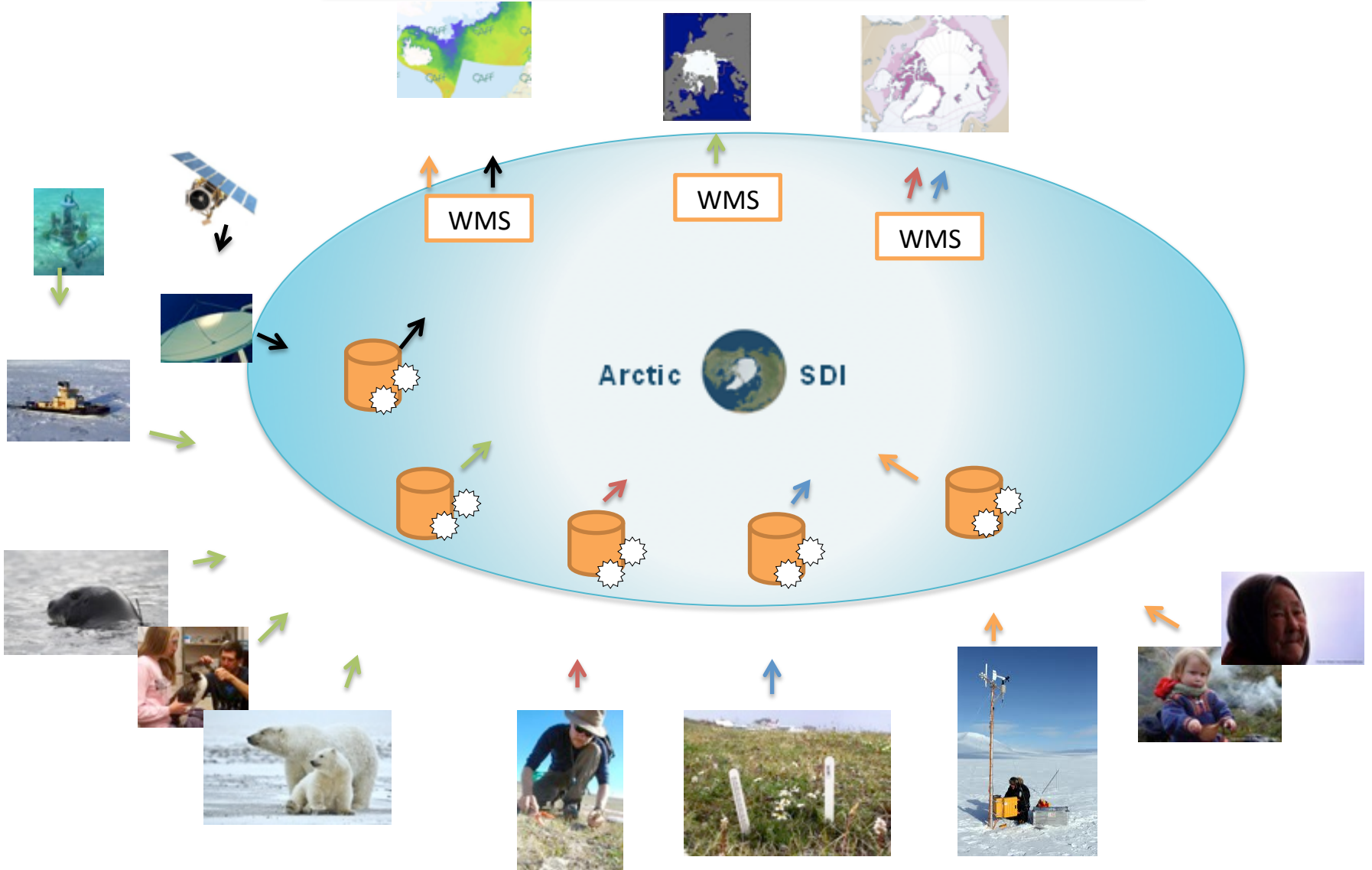
Arctic



SDI

Dataflow

# Contribution from Arctic Council WG's



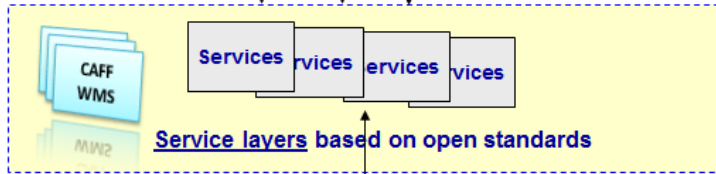
# CAFF and Arctic SDI

## Dataflow

Arctic SDI Geoportal

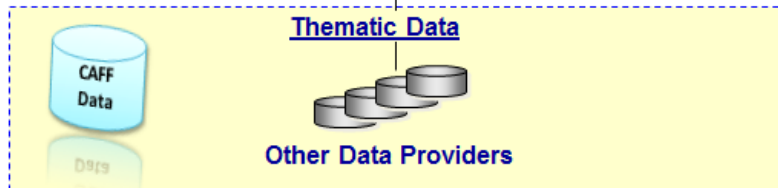


Visualization



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](#)

50 km  
20 mi



- SEARCH
- MAP LAYERS
- SELECTED LAYERS 1
- MY DATA
- MAP PUBLISHING

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# 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](http://arctic-sdi.org)