

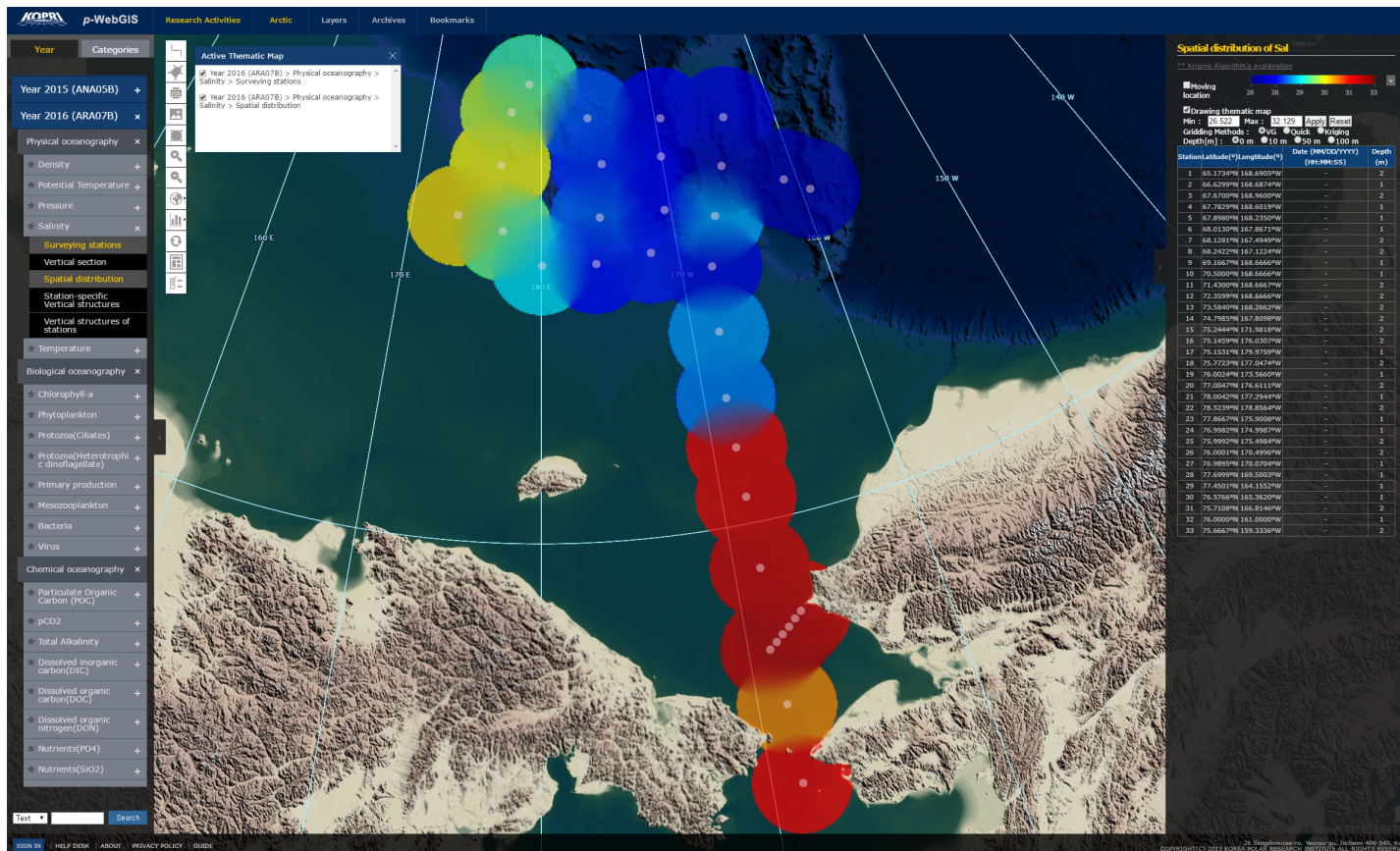
# $p$ (Polar)-WebGIS for Arctic Data Sharing

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# Updates on *p*-WebGIS

- Uploaded 2016 Arctic cruise data
  - 23 types of in-situ measurements



# SWOT

## Strength

- S1. foundation of Polar in-situ data management system
- S2. Providing spatial analysis of in-situ data
- S3. Design for in-situ measurement database
- S4. Categorization of in-situ measurement
- S5. Sharing in-situ data

- O1. Unique system in Polar oceanography
- O2. Data sharing network with diverse research groups
- O3. Low-cost development using open source GIS

## Opportunity

## Weakness

- W1. Weakness in raw data management
- W2. Non-standardized data
- W3. Limitation of data quality check
- W4. Lack of various spatial analysis
- W5. No time series data management
- W6. Lack of professional manpower (GIS area)

- T1. Increase in diverse oceanography information systems
- T2. High maintenance fee for database management system and commercial GIS engine

## Threat

# New data category

## Re-define data category by interviews

<b>General Information</b>	Ship Track		
	Surveying Station		
<b>Physical Oceanography</b>	Density		
	Potential temperature		
	Pressure		
	Salinity		
	Temperature		
<b>Biological Oceanography</b>	Chlorophyll-a	Chlorophyll-a	
		Micro Chlorophyll-a	
		Nano Chlorophyll-a	
		Pico Chlorophyll-a	
	Plankton	Mesozooplankton	
		Protozoa	Ciliates
			Heterotrophic dinoflagellate
			Heterotrophic nanoflagellate
		Phytoplankton	abundance
			Species Number

<b>Biological Oceanography</b>	New production	
	Primary production	
	Macromolecular composition	Carbohydrates
		Lipids
		Proteins
Virus & Bacteria	Virus abundance	
	Bacterial abundance	
<b>Chemical Oceanography</b>	Dissolved inorganic carbon(DIC)	
	Particle organic carbon(POC)	
	Dissolved organic Carbon(DOC)	
	Dissolved organic nitrogen(DON)	
	Nutrients	NH4
		NO2+NO3
		PO4
		SiO2
	pCO2	
	pH	
Total Alkalinity(TA)		
<b>Marine Geology</b>	Multichannel seismic survey	
	Sub-Bottom profile	
	Swath Bathymetry	



# Future plans and roadmap

