

Data Portal and Integration in JAMSTEC

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(JAMSTEC)

- Overview of Data Management in JAMSTEC
- Integration in Data Publication
 - Development of **Data Portal**
 - Further extent to **One-Stop Data Shop**
- Integration of Multi-Disciplinary Data
 - Conversion of **Data** to Scio-Economic **Information**

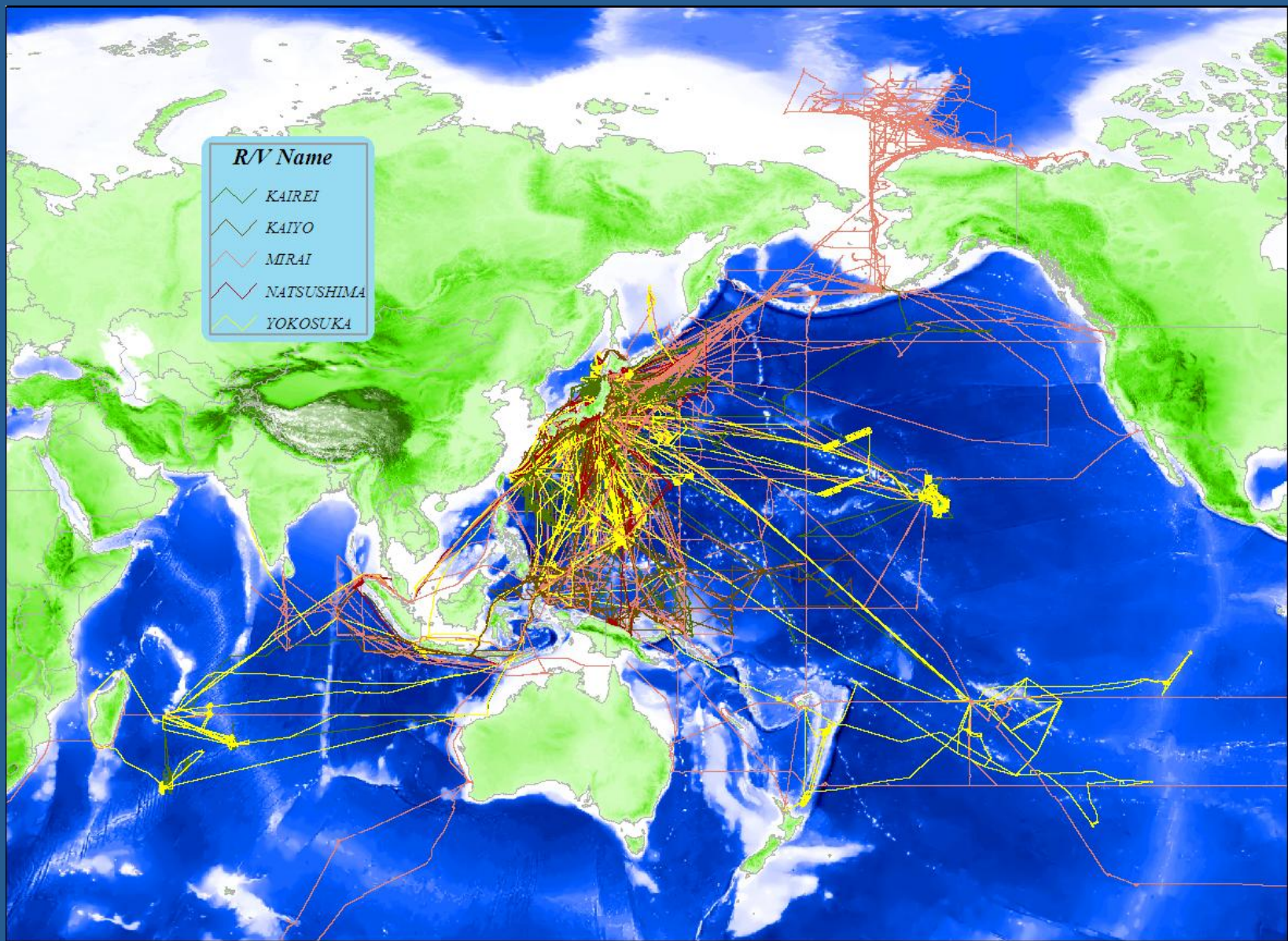
1. Overview of Data Management in JAMSTEC

history

- Started research cruises since 1981.
- Started data management since 1998.
- Established “Data Policy” since 2007.

now

- Operates 8 research vessels and several submersibles.
- Conducts 100 cruises and 250 dives a year and moorings / terrestrial observations .



Cruise Tracks of JAMSTEC's Research Vessels since 1998

Amount of Data of Data Types Disseminated

Data Type	Number of Data (units)	Remarks
Cruise Observation Data	27,000 (observations)	Temperature, Salinity, Nutrients, Currents, Bathymetry, Gravity, Ocean Meteorology, etc.
Samples	47,000 (samples)	Rocks, Sediment Cores, Biological Samples
Deep Sea Images	15,500(tapes) 714,000(shots)	Videos and Still Images by Submersibles
Terrestrial Observations (Metadata)	300(points)	Meteorology or Atmospheric Composition Observatories, Biological Survey Points
Moorings / Fixed Stations (Metadata)	200(points)	TRITON, JKEO, K2, OBS, etc.

JAMSTEC Data Site for Research Cruises
 JAMSTEC 観測航海データサイト

Terms and Conditions | User Registration | Application for Data

JAMSTEC Top Page > Databases > JAMSTEC Data Site for Research Cruises

JAMSTEC operates research vessels and submersibles for various objectives. At this site JAMSTEC disseminates the data and samples obtained via its research cruises. Cruises are arranged in vessels, codes. Links to the page for each data and sample are posted on this page.

This site is for the JAMSTEC cruises: Yokosuka, Kaiyō and Mirai, and submersibles operated on these cruises. Samples from submersibles are found on the data page of the related cruise.

Please read the "Terms and Conditions" page before using the data.

JAMSTEC E-library of Deep-sea Images
 深海映像・画像アーカイブス

Search for Images

Recommended video of the month
 Agnathosae **Video &**

Marine Biological Sample Database
 海洋生物サンプルデータベース

Data Policy

Japanese | English

Details of Marine Biological Samples which were collected during scientific missions of JAMSTEC ships (NATSUSHIMA, KAIYO, YOKOSUKA, KAIREI and MIRAI) or submersibles are registered in this database.

Research Cruises

and many Data Sites from Research Projects...

JAMSTEC Document Catalog

HOME | 日本語 | Series list | Adv

TITLE_TREE | TITLE_LIST | URL | DATA

ALL DATA

- Publicrelations document
 - JAMSTEC Newsletter
 - Blue Earth(71)
 - JAMSTEC Annual Rep
 - JAMSTEC Annual Rep
 - JAMSTEC(46)
 - Summary of the JAMS
 - Memorial booklet of su
- Academic documents
 - JAMSTEC-R(125)
 - JAMSTEC Journal of D
 - Report of Japan Marine
 - Cruise reports(40)
 - CHIKYU(5)
 - KAIREI(77)
 - KAIYO(67)
 - MIRAI(73)
 - NATSUSHIMA(122)
 - YOKOSUKA(60)

Academic documents > Cruise reports

Chikyu | Kairei | Kaiyo | Mirai

CHIKYU | KAIREI | KAIYO | MIRAI

Natsushima | Yokosuka

NATSUSHIMA | YOKOSUKA

Cruise Reports Database

BISMaL
 For a better understanding of marine biodiversity

About BISMaL

BISMaL is a data system for biodiversity information, particularly in biogeographic data of marine organisms, consisting of biological data of marine organisms collected by the Japan Agency for Marine Earth and Technology (JAMSTEC), and is operated at the Global Oceanographic Data Center (GODAC) of JAMSTEC.

[Read more](#)

About BISMaL data

BISMaL provides biological information including photographs, descriptions on morphology, biology, anatomy, etc.

[Read more](#)

How to use BISMaL

Marine organisms registered to BISMaL are searchable by multiple methods. Scientific names, depth, localities or a combination of them, or search by browsing a taxonomic tree may lead you to each taxon page including detailed information of the taxon.

[Read more](#)

NEWS

NEWS >> Show all **BISMaL data at a glance**

[Search by Cruise ID](#)

Biodiversity Database

Data Publication Sites in JAMSTEC

2. Integration in Data Publication

- Independent Data Sites to Data Portal
- Data Portal to One-Stop Data Shop

Why Data Portals?

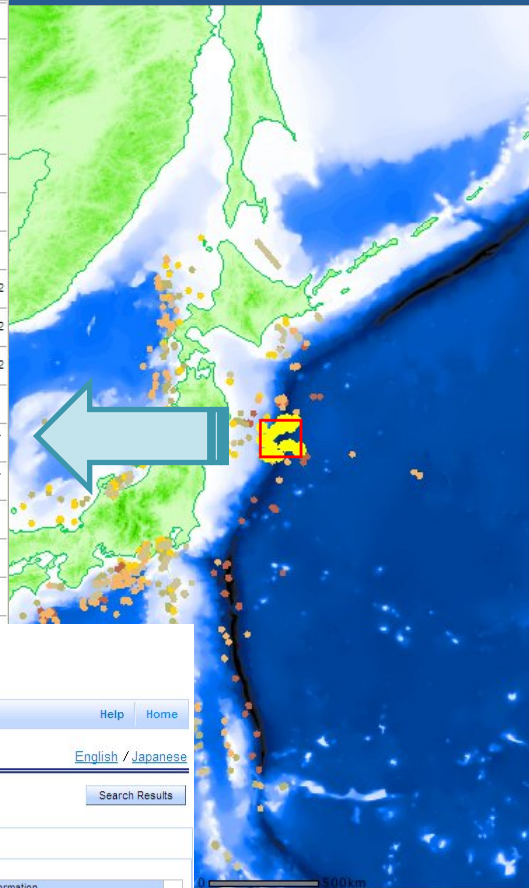
- Large **amount** of data from wide range of **research fields** and **geographical area**
- **Many kinds** of data publication sites



- Data Discovery Services were necessary.
 - “**Data Search Portal**” for observational data
 - “**Data Catalog**” for data publication sites
- Designed to complement each other

Search Result (Select Data Set : Deep-Sea Images) 25 Selected

No.	Data ID	Latitude	Longitude	Period (start)	Period (end)	Ship Name	Cruise ID	DSRV Name	Dive No.	Web Site	Area Name	Station Name
1	0045-00000080	38.1863	144.0093	1998/07/20	1998/07/20	KAIREI	KR98-07_Leg1	KAIKO	80	Jump	日本海溝	B-1海城
2	0045-00000082	38.2202	144.0085	1998/07/25	1998/07/25	KAIREI	KR98-07_Leg1	KAIKO	82	Jump	日本海溝	B-1海城
3	0045-00000245	38.655	143.586	2002/06/17	2002/06/17	KAIREI	KR02-07_Leg2	KAIKO	245	Jump	三陸沖	B-5
4	0045-00000256	38.4733	144.867	2002/07/22	2002/07/22	KAIREI	KR02-09	KAIKO	256	Jump	三陸沖	A-1
5	0045-00000257	38.4492	144.8588	2002/07/23	2002/07/23	KAIREI	KR02-09	KAIKO	257	Jump	三陸沖	A-1
6	0045-00000339	38.2858	143.5047	2005/07/04	2005/07/04	KAIREI	KR05-07	KAIKO	339	Jump	日本海溝	宮城県沖陸側斜面c
7	0045-00000342	38.543	144.253	2005/07/20	2005/07/20	KAIREI	KR05-08	KAIKO	342	Jump	三陸沖	日本海溝UDOBS-2
8	0045-00000343	38.543	144.253	2005/07/21	2005/07/21	KAIREI	KR05-08	KAIKO	343	Jump	三陸沖	日本海溝UDOBS-2
9	0045-00000344	38.5388	144.2568	2005/07/22	2005/07/22	KAIREI	KR05-08	KAIKO	344	Jump	三陸沖	日本海溝UDOBS-2
10	0045-00000388	37.9633	145.0145	2007/06/02	2007/06/02	KAIREI	KR07-07	KAIKO	388	Jump	日本海溝沖	チャコチップ海丘群
11	0045-00000389	38.381	144.8955	2007/06/03	2007/06/03	KAIREI	KR07-07	KAIKO	389	Jump	日本海溝	三陸沖アケライズ
12	0045-00000390	38.3988	144.7888	2007/06/04	2007/06/04	KAIREI	KR07-07	KAIKO	390	Jump	日本海溝	三陸沖アケライズ
13	0045-00000391	38.1767	145.1667	2007/06/05	2007/06/05	KAIREI	KR07-07	KAIKO	391	Jump	日本海溝	海溝海側地震震源域
14	0045-00000392	38.0708	145.0208	2007/06/06	2007/06/06	KAIREI	KR07-07	KAIKO	392	Jump	日本海溝沖	チャコチップ海丘群
15	0045-00000393	38.135	145.0333	2007/06/07	2007/06/07	KAIREI	KR07-07	KAIKO	393	Jump	日本海溝沖	チャコチップ海丘群
16	0045-00002892	38.96										
17	0045-00002894	38.00										



Data Selection

[All](#) [Clear](#) [Refresh](#)

- Bottle Sampling
- Bathymetry
- Cruise Track
- CTD
- Dive Point
- Deep-Sea Images
- Gravity Line
- Holes Drilled by CHIKYU
- LADCP
- Land Atmospheric Composition
- Land Solid Earth
- Land Vegetation
- Land Weather
- Land Station (other)
- Magnetics Line
- Marine Biological Sample
- Ocean Meteorology Line
- Ocean Time Series
- Primary Production
- Rock Sample
- Sea-Bottom Mooring
- Sediment Core
- Subbottom Profiler
- (Sub)Surface Mooring
- Underway ADCP
- Underway pCO2
- Underway TCO2
- Underway Thermo Salino Graph
- XBT

JAMSTEC E-library of Deep-sea Images

深海映像・画像アーカイブ

Search for images [Help](#) [Home](#)

[Search for images](#) > [List of search results](#) > [View videos and photos](#) [English](#) / [Japanese](#)

SHINKAI 6500 1073Dive 2008/05/17 [Search Results](#)

[Detail](#) [Matrix of thumbnails](#)

[Photos\(0N\)](#) [Photos\(OUT\)](#)

No	Thumbnail	Related Information
1		
2		
3		
4		

PHOTO ID:6K1073IN0020
SHINKAI 6500 Dive No:1073

Data Search Portal

- Metadata of observations
 - Position, Date/Period, Cruise ID, Data Type, Variables...
 - **URL Link** to the data dissemination page of the corresponding data
- can collaborate with **any data system**, which has the relevant URL for the specific data.
- 35,000 observations and increasing...

Data Tree

- ALL DATA(24)
 - Science Keywords(24)
 - ATMOSPHERE(7)
 - BIOLOGICAL CLASSIFICATION(1)
 - BIOSPHERE(5)
 - OCEANS(16)
 - BATHYMETRY/SEAFLOOR(1)
 - MARINE GEOPHYSICS(1)
 - MARINE SEDIMENTS(3)
 - MARINE VOLCANISM(1)
 - OCEAN CHEMISTRY(5)
 - OCEAN CIRCULATION(1)**
 - OCEAN HEAT BUDGET(1)
 - OCEAN PRESSURE(6)
 - OCEAN TEMPERATURE(1)
 - OCEAN WAVES(1)
 - OCEAN WINDS(4)
 - SALINITY/DENSITY(10)
 - SEA SURFACE HEIGHT(1)
 - TIDES(1)
 - PALEOCLIMATE(2)
 - SOLID EARTH(7)
 - Location(24)
 - CONTINENT(2)
 - GEOGRAPHIC REGION(3)
 - OCEANS(17)

Data Detail

OCEAN CIRCULATION

Data List

[JAMSTEC Post-WOCE Hydrographic Data](#)

Ocean General Circulation Experiment (OGCE) data collected by the International Oceanographic Commission (IORGC)/JAMSTEC (P03, P10, P06, A06) during the World Ocean Circulation Experiment (WOCE) oceanic observation period.

[JAMSTEC JKEO Buoy Web Site](#)

On February 18, 2003, JAMSTEC Kuroshio Experiment (JKEO) buoy was deployed at 34.64E (nominal 34.64E) under the collaboration of the National Institute of Advanced Industrial Science and Technology (AIST) and the National Institute of Oceanography (NIO). Those flux data of heat, moisture and salinity. Those flux data are available.

[JAMSTEC OFES \(Ocean General Circulation Model\) Dataset](#)

OFES (OGCM for the Earth System) is a global ocean circulation model. It performs decadal interannual variability simulation of the Earth System. The Earth System Global Change (ESGC) project is a project for the development of the Earth System Global Change (ESGC) model. The Earth System Global Change (ESGC) model is a project for the development of the Earth System Global Change (ESGC) model. The Earth System Global Change (ESGC) model is a project for the development of the Earth System Global Change (ESGC) model. Several research groups are participating in the development of the Earth System Global Change (ESGC) model. Simulation results are available.

JAMSTEC Data Site for Research Cruises

[SIMPLE VIEW](#) | [DETAIL VIEW](#)

[Title]JAMSTEC Data Site for Research Cruises

[Data Set Citation]

[Dataset Creator]Japan Agency for Marine-Earth Science and Technology

[Dataset Title]JAMSTEC Data Site for Research Cruises

[Online Resource]<http://www.godac.jamstec.go.jp/cruisedata/e/>

[Summary]JAMSTEC has operated research vessels, NATSUSHIMA, KAIYO, YOKOSUKA, KAIREI and MIRAI, and submersibles and performed research activities for more than a quarter of a century. On this data site JAMSTEC disseminates the data and samples which were obtained via its research cruises.

[Science Keywords]

- EARTH SCIENCE -> OCEANS -> [OCEAN TEMPERATURE](#)
- EARTH SCIENCE -> OCEANS -> [OCEAN CIRCULATION](#)
- EARTH SCIENCE -> OCEANS -> [BATHYMETRY/SEAFLOOR TOPOGRAPHY](#)
- EARTH SCIENCE -> OCEANS -> [MARINE GEOPHYSICS](#)
- EARTH SCIENCE -> OCEANS -> [SALINITY/DENSITY](#)
- EARTH SCIENCE -> SOLID EARTH -> [GEOMAGNETISM](#)
- EARTH SCIENCE -> OCEANS -> [OCEAN WINDS](#)
- EARTH SCIENCE -> OCEANS -> [OCEAN CHEMISTRY](#)
- EARTH SCIENCE -> SOLID EARTH -> [GEODETICS/GRAVITY](#)

[Source Name]

[Short Name]SHIPS

[Location]

- [CONTINENT -> INDIAN OCEAN](#)
- [CONTINENT -> PACIFIC OCEAN -> WESTERN PACIFIC OCEAN](#)
- [CONTINENT -> PACIFIC OCEAN](#)

[Personnel]

[Role]DIF AUTHOR

[Organization]Data Management Office

[Personnel]

[Role]TECHNICAL CONTACT

[Organization]Data Management Office

[Data Center]

[Data Center Name]

[Short Name]JAMSTEC

[Related URL]

[Type]GET DATA

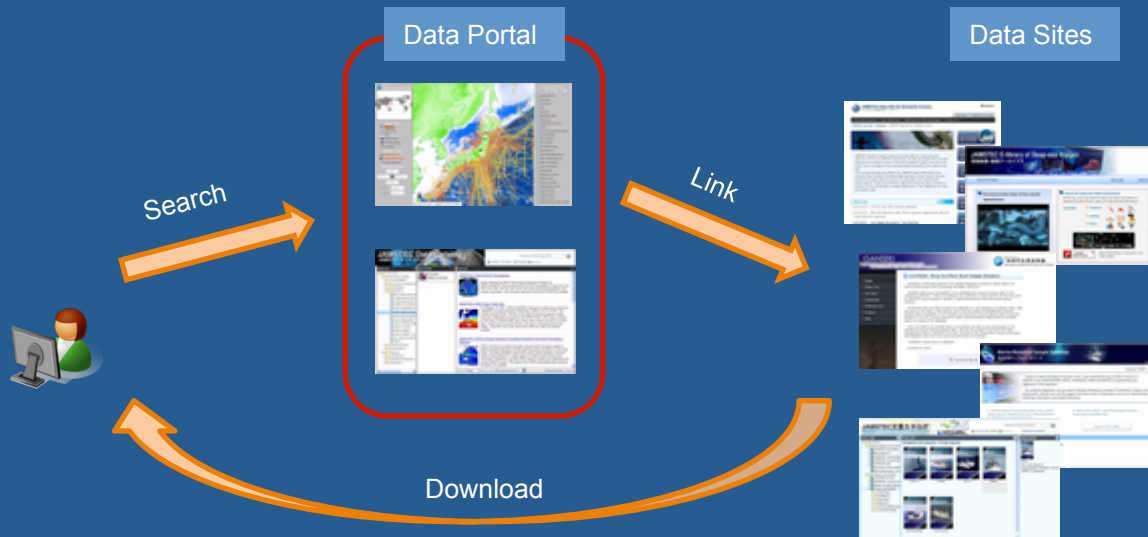
[URL]http://www.jamstec.go.jp/dataportal/index_eng.html

Data Catalog

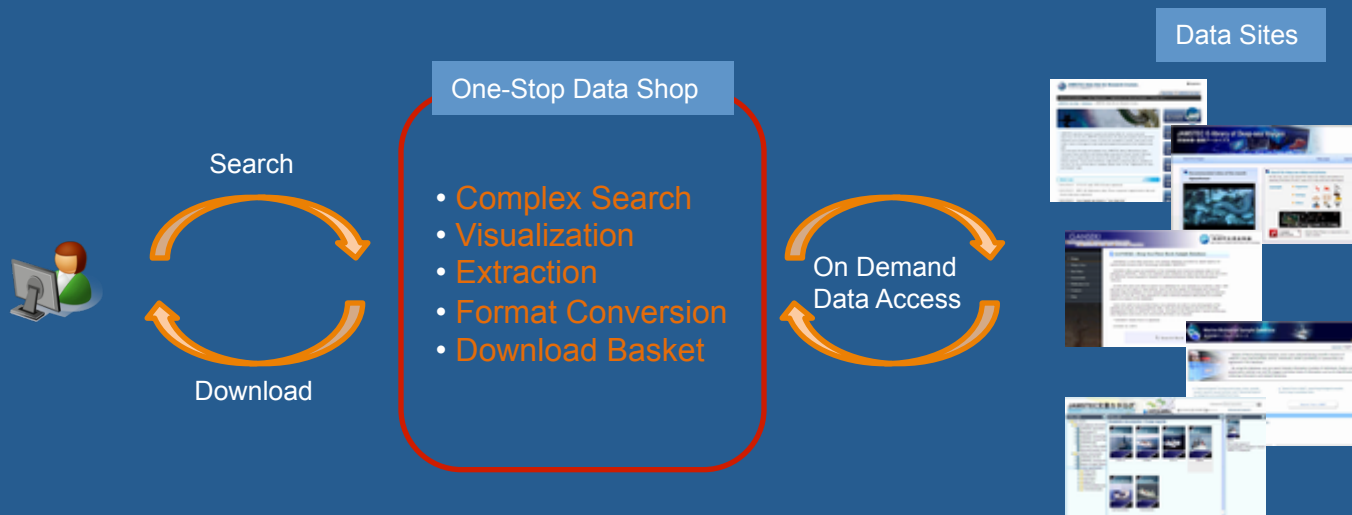
- Metadata of databases
 - Title, Summary, Citation, Data Center, Status...
 - **Science Keywords**
- Search by classification trees of keywords ;
 - Scientific fields or variables
 - Geographical area
- Metadata Standard : Directory Interchange Format (**DIF**) in GCMD and Japanese version

2. Integration in Data Publication

- Independent Data Sites to Data Portal
- **Data Portal to One-Stop Data Shop**(future goal)



Data Access using "Data Portal"



Data Access in "One-Stop Data Shop"

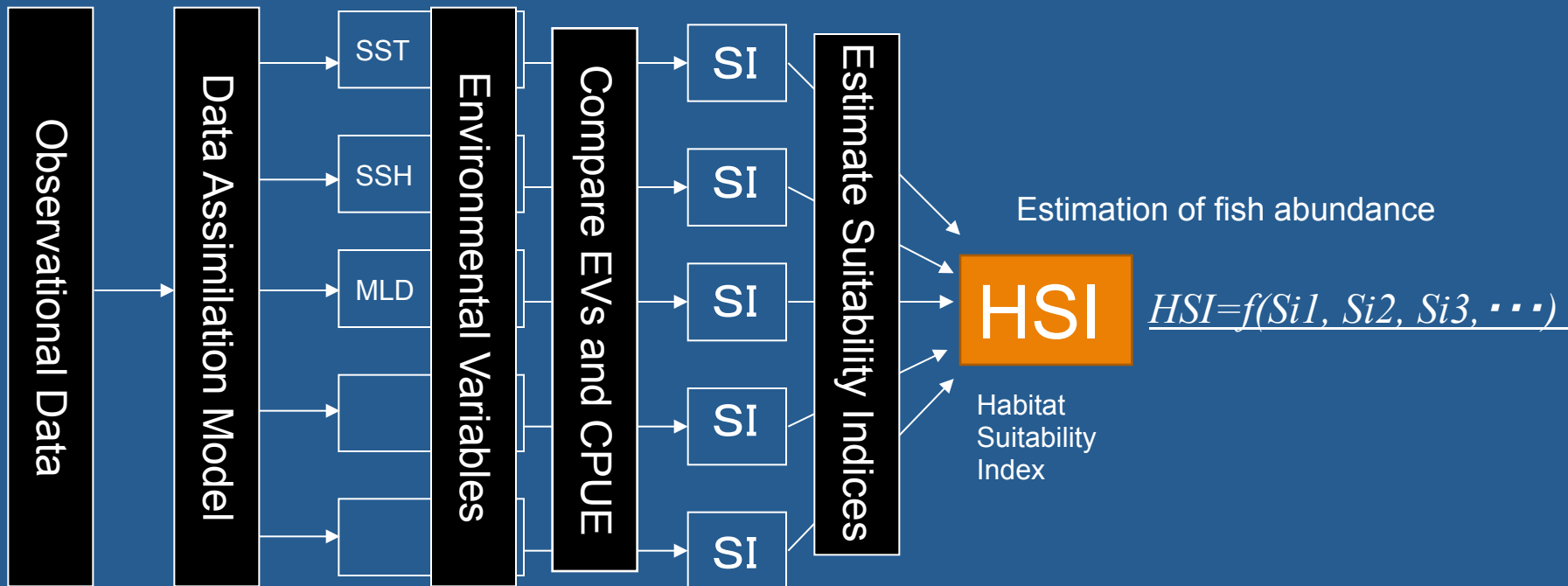
One-Stop Data Shop

- Provides higher level of data handling...
 - **Search** by complex criteria
 - **Browse** data before download
 - **Extract** data in the area/period of interest
 - **Convert** data to favorite format
 - Keep datasets in a basket and **download**
- Challenges
 - One-Stop Data Shop must communicate with data sites automatically

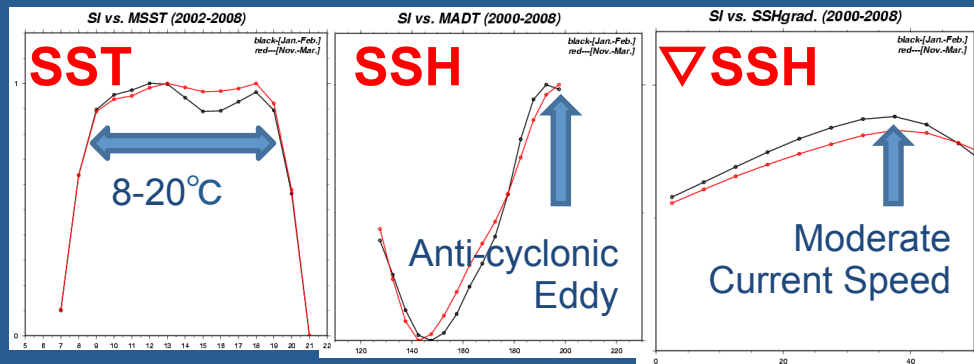
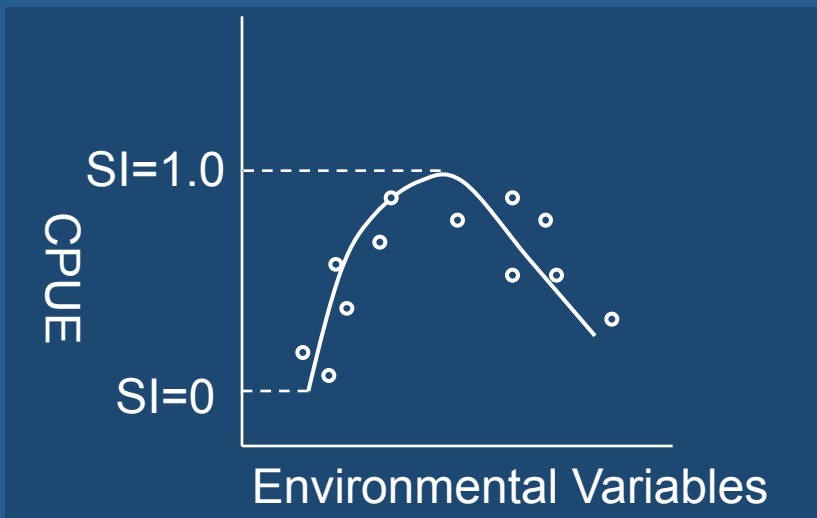
3. Integration of Multi-Disciplinary Data

- Observation **Data** to Scio-Economic **Information**
- example : Study for forecast of abundance of neon flying squid using data assimilation model

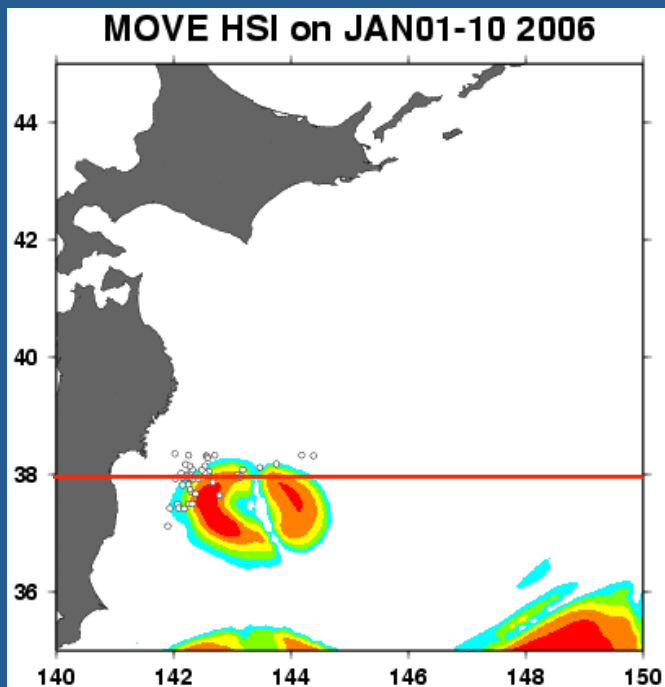




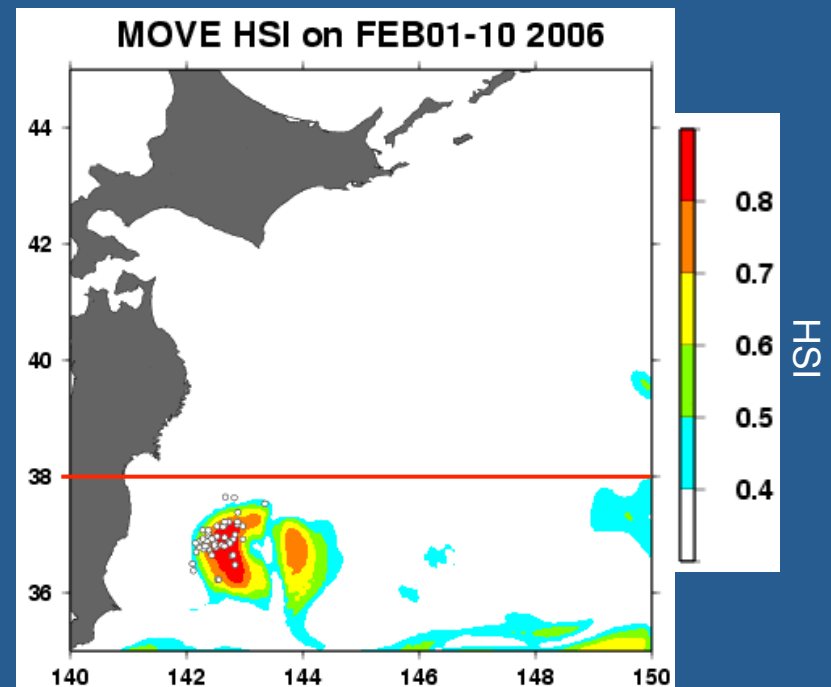
SI: Suitability index



- Calculation of HSI from output of 3D data assimilation model
- Compared with the actual fishing point records
- Shows possibility of efficient fishing.



1 month later



white dots: fishing points by commercial vessels

Summary

- Integration of data publication sites
 - Data portals (Data Search Portal and Data Catalog) are in service now
 - Going to develop the Integrated data handling system : One-Stop Data Shop
- Integration of observation data into social beneficial Information
 - Data assimilation method is applied to make information for fishing
- DrC/JAMSTEC has both functions.

Thank you for your attention.