

Annex V-1 Portal site on Remote Sensing

1 Concept

A portal site is proposed as an option to share the common understanding on the status, challenges, and opportunities of marine environmental monitoring by RS in NOWPAP region and to share the information for the future monitoring system establishment. The portal site is actively used for capacity development, diffusion, and enlightenment as well as domestic and international R & D carried out in NOWPAP Members by improving its contents (Figure 1).

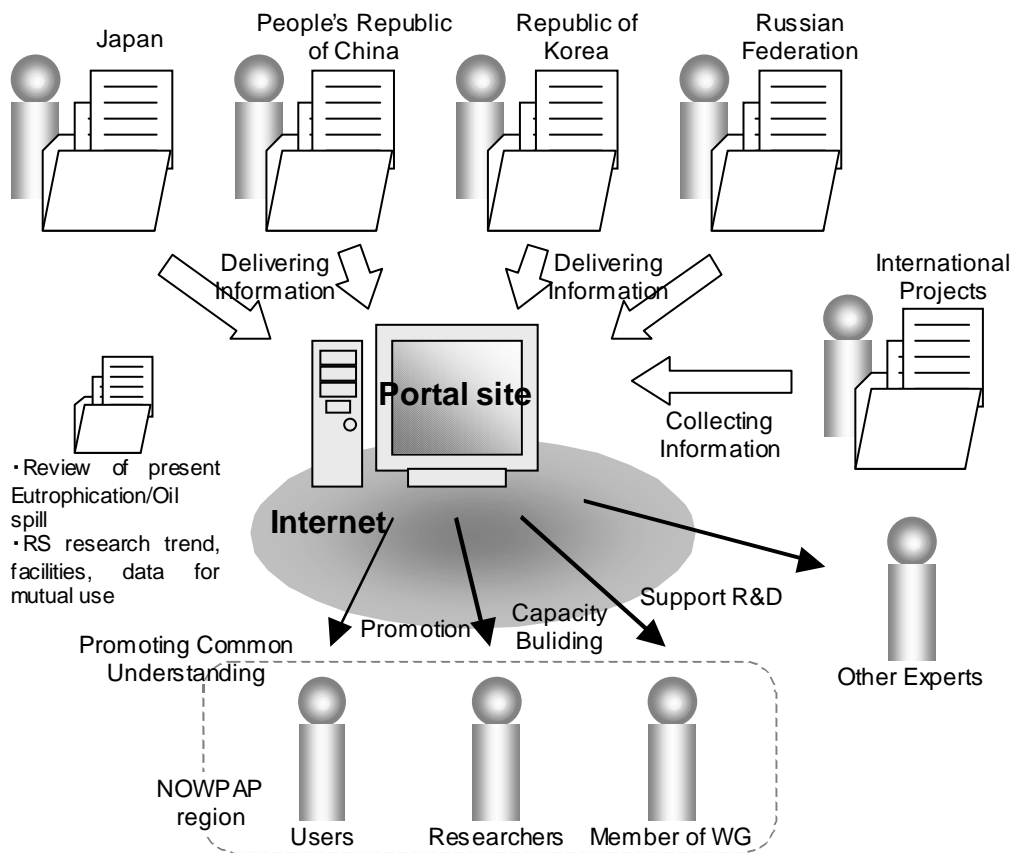


Figure 1 Portal site in NOWPAP region

2 Proposed Content

To consider the specification of the portal site, existing major portal sites on marine monitoring by RS were reviewed as shown in Table 1. Based on the review, necessary information and functions of NOWPAP portal site will be proposed in the later section. Figure 2 shows a basic concept of the contents.

2.1 Information

The portal site provides information on marine remote sensing as shown bellow. The information will be basically referred from national reports as well as from other regions and projects if necessary.

- Specification of available sensors
agency, satellite, operation period, bands, spatial resolution, swath, observing cycle, variables, etc.
- Information on data and products
specification, how to get, etc.
- Reference list on monitoring of eutrophication and oil spill
author, presented year, title, source, etc.
- Utilization examples of monitoring eutrophication and oil spill
organization, objective, monitoring method, results, problems, etc.
- Research trend
organization/researcher, abstract, etc.
- List of related organizations
- News
schedule of symposium, workshop sponsored by NOWPAP or other regions and projects, etc.
- Education materials and publicity materials useful for capacity development, diffusion, and enlightenment

2.2 Functions

The portal site's functions are as follows.

- Anyone can browse freely.
- Information is organized by index such as sensor, utilization field, or country.
- In addition to English as a basic language, each member's language is also used.

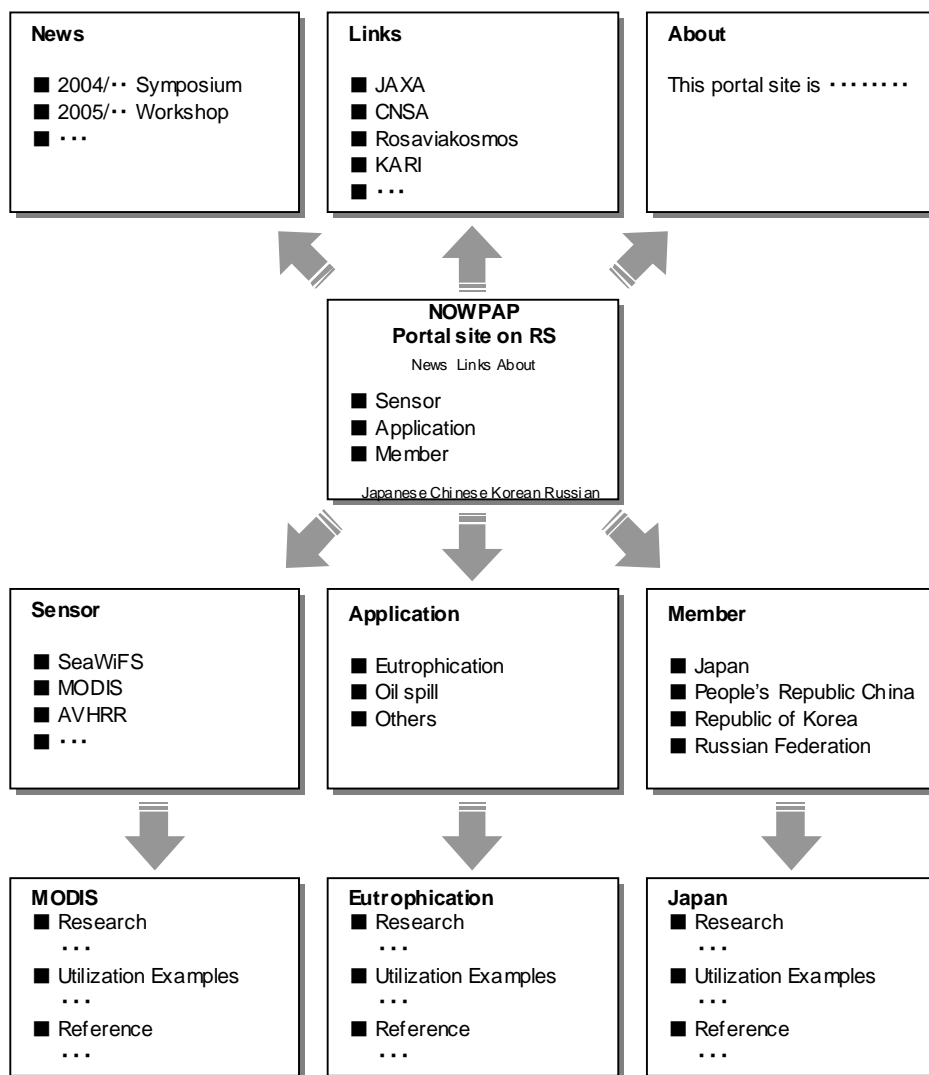


Figure 2 Basic Concept of the Contents in portal site

3 Development and Operation

Flowchart of development and operation of the portal site is shown in Figure 3. Proper maintenance expected in the real operation as shown below is very important as well as the development of the portal site. Thus, the maintenance system should be considered enough.

- Update of the information
New information should be delivered by regular updates.
- Quality management
Quality management should be strictly applied to deliver consistent information.
- Maintenance and management
Maintenance and management should be conducted for reliable and continuous operation.

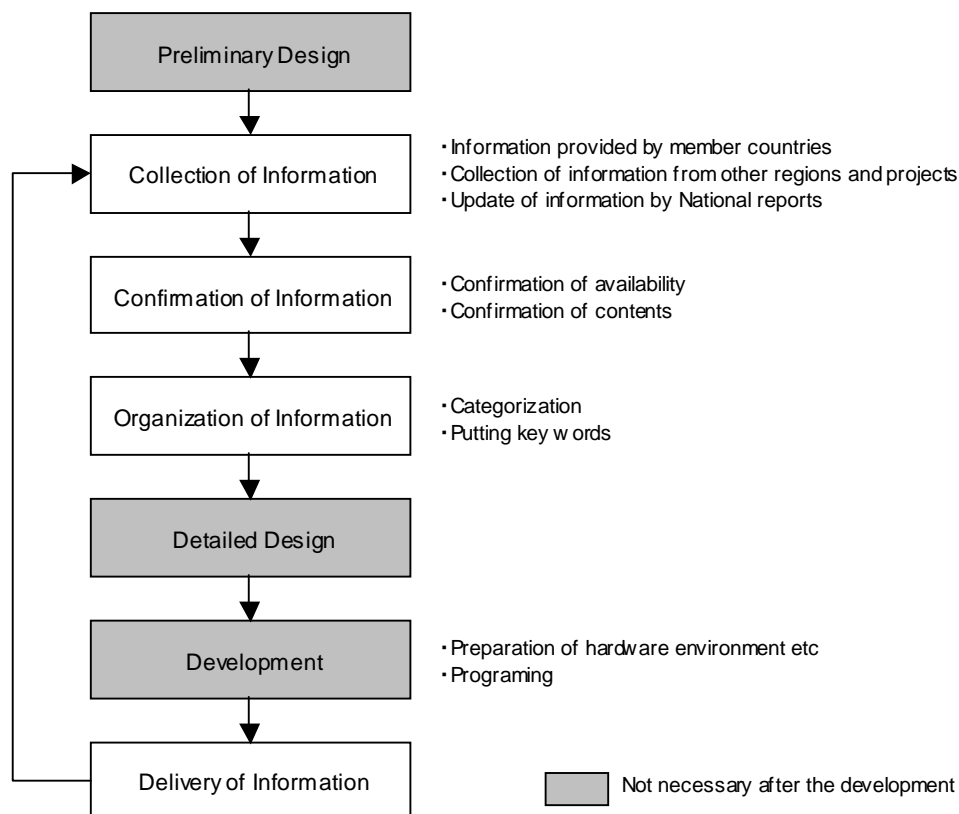


Figure 3 Development and Maintenance of portal site

4 Challenges

To operate the portal site as an useful tool in line with the Concept described in section 1, the priority would be 1) active supply of information by member countries, 2) enough collection of information from other regions and projects, 3) providing easy-to-use interface to guarantee reliable access, and 4) effective publicity by CEARAC website and Newsletter to encourage frequent access by many people including NOWPAP region.

Table 1 Contents and Characteristics of Existing Major Portal Sites of Marine RS

	ADEOS Ocean Project http://kuroshio.eorc.nasda.go.jp/Ocean/index.html	Internet Resources on Ocean Remote Sensing Sensors, Data, Education, and Ocean Models http://ioc.unesco.org/goos/Remote_sensg/index.html
Organization	NASDA Earth Observation Research Center	UNESCO IOC GOOS Project Office
Item	Ocean color, Sea surface temperature, Sea surface wind, Ocean surface topography	SSH (Sea Surface Height), SST (Sea Surface Temperature) Winds, SSS (Sea Surface Salinity), Sea Ice, Ocean Colour, Precipitation, Cloud Cover, Aerosols
Category	Sensors for Ocean color CZCS, OCTS, SeaWiFS, MODIS, MERIS, GLI Sensors for Sea surface temperature AVHRR, TMI, VIRS Sensors for Sea surface wind NASCAT, Q-Scat Sensors for Ocean surface topography ALT Synthetic Aperture Radar SAR, AMI-SAR	Earth Observation Satellites ENVISAT, Aqua, Terra, ADEOS, ERS-1/2 Altimetry Satellites TOPEX/Poseidon, Jason-1 Ocean Colour Satellites SeaWiFS Sea Ice and Meteorology Satellites TRMM, DMSP, RADARSAT-1, ICESat
Data	Satellite oceanography Database (Link Only) NASDA sites OCTS, SeaWiFS(TRIC/NASDA), AVNIR, VIRS, TMI, PR, MODIS(TRIC/EORC) Other sites TOMS(GFSC/NASA), TOPEX/Poseidon, SeaWiFS, MODIS, TAO/TRITON, Pathfinder SST, NCEP Reynolds SST, IRI	Remote Sensing Data and Products (Link Only) Multimission Data Bases Sea Surface Temperature Data Scatterometry Data Altimetry Data Ocean Colour Data Meteorology Data
Links	Domestic Links Oceanography and Fishery Sciences (Universities) Research Institute (Government and Semi-Government) National Fisheries Research Institute Nonprofit Organization Overseas International organization International project The organization of each country	Ground Receiving Centers National and International Space Agencies Educational Resources on Remote Sensing General Remote Sensing Ed. Res. Sensor-specific Educational Resources Other Ed. Res. on Remote Sensing Remote Sensing Software and Tools General Remote Sensing S&T Sensor-specific Software and Tools Visualization Software and Tools
Others	Category Physical oceanography Chemical oceanography Biological oceanography Analysis support software Sitemap	Ocean Models (Link Only)
Characteristics	<ul style="list-style-type: none"> • Categorizing and introducing general information on marine RS and positioning of RS in marine research by various sensors as key words. • Full explanation of sensor specification. • Links to data/product delivery sites as well as various data sets. • Free access. • Details of data/products need to refer the links. • Education materials and information intended for capacity development and diffusion and not provided. 	<ul style="list-style-type: none"> • Categorizing and introducing links of marine RS by various sensors as key words. • Rich links to data/products delivery sites. • Free access • Detailed information needs to refer the links.