



Republic of Korea

ROK MSDI

Marine Spatial Data Infrastructure

UN GGIM WG MGI, 9 – 13 May 2022

Plenary Session 4 “Effective governance,
policy and legal frameworks and financing
for integrated marine geospatial informati
on management”

1. MSP Act and Governance
2. MSDI Act, Governance and Financing





MSP Act

MSP Background , Concept, and Laws

Background

South Korea's MSP is introduced for constructing a 'pre-planning and post-use' system based on the characteristics of marine space and values of the ecosystem, preventing reckless uses of marine space.

Concept

South Korea's MSP aims to build a system enabling planned use of marine space by determining desirable marine uses for a better management through scientific spatial analysis and participation of interested parties

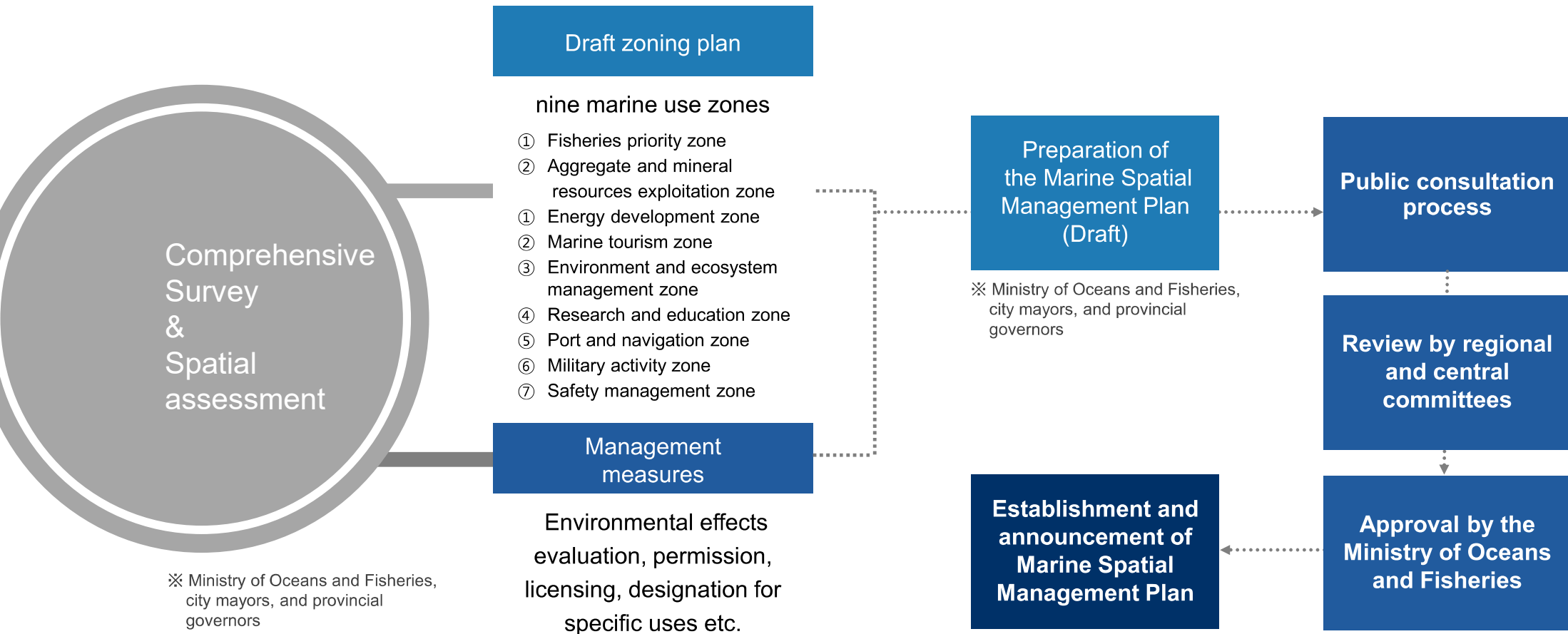
MSP relevant laws and policies

- Marine Spatial Planning and Management Act, which entered into force on 18 April 2019.
- 1st Marine Spatial Framework Plan (2019)
- Marine Spatial Management Plan



MSP

Planning System at a Regional Level



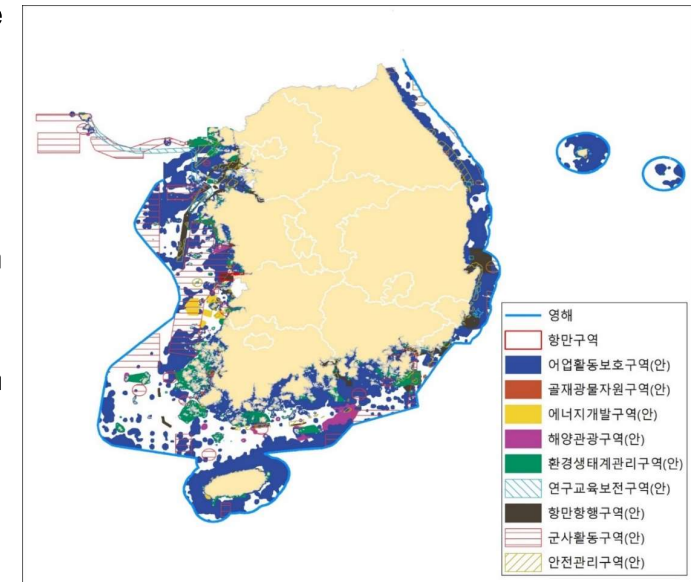


MSP

Nine Marine Use Zones



- Fishery activity protection zones
- Aggregate and mineral resource development zones
- Energy development zones
- Marine tourism zones
- Environment and ecosystem management zones
- Research and education conservation zones
- Port and navigation zones
- Military action zones
- Safety management zones

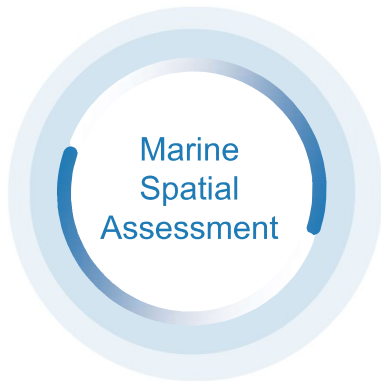


Nine Marine Use Zones are to be decided by the results from Marine Spatial Assessment and qualified evaluation upon spatial characteristics deriving from relevant legal and institutional settings and demands for marine use, development, or conservation.



MSP

Marine Spatial Assessment



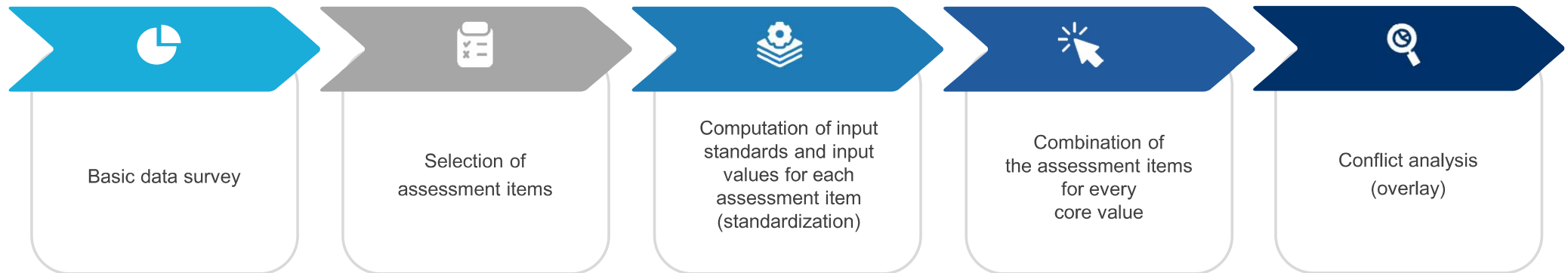
- Progress of scientifically assessing values of marine development and preservation, selecting core values, and grading them are the foundation for Ocean Zoning (priority area)
- Marine spatial Assessment is intended to identify marine space with relatively high environmental, social, and cultural interests, as well as high environmental, social, and economic values.
- This method was developed to assess core marine values based on the information about marine environment, ecology, resources, and uses.

「Marine Spatial Planning and Management Act」 Article 2

- ⑦ "Marine spatial assessment" refers to an assessment for directing and determining a sustainable use, development, and preservation of marine space.

Methods

- ① Identifying Representative Activities
- ② Setting of area for each Representative activities



02

Marine Spatial Data Infrastructure

MSP Governance



MSP

MSP Information system



알림

종합지도

해양공간정보와 해양에 대한 다양한 정보를 한눈에



해양공간 관리계획

해양공간 관리에 대한 정책 방향을 정하고, 해양용도구역을 지정, 관리



관련법령정보

해양공간계획과 관련된 법령, 법률/시행령/시행규칙



FAQ

해양공간계획과 관련된 자주 묻는 질문과 답변



해양공간관리계획이란?

해양공간정보와 해양에 대한 사회·경제적 수요 등을 고려한 해양공간 특성평가를 통해 해양의 용도와 관리방향을 사전에 정하여 해양공간의 이용·개발·보전활동을 합리적으로 배분하고 지속적으로 관리하는 것

자세히보기

부산 및 부산 인근 배타적 경제수역 해양공간관리계획 고시

→ 더 알아보기

- 해양공간관리계획 총괄도
- 해양공간관리계획 INDEX
- 해양용도구역 1:50000축척



MSP DSS (www.msp.go.kr)

Bigdata platform (www.vadahub.go.kr)



New Act

Enforcement of the law on the utilization of marine survey and marine data ('21.2.)

관련 연혁 위임행정규칙 규정

해양조사와 해양정보 활용에 관한 법률 (약칭: 해양조사정보법)

[시행 2021. 2. 19.] [법률 제17063호, 2020. 2. 18. 제정]

해양수산부(해양정보과), 044-200-5357

제1장 총칙

- 제1조(목적) 이 법은 해양조사의 실시와 해양정보의 활용에 관한 사항을 규정함으로써 선박의 교통안전, 해양의 보전·이용·개발 및 해양에 대한 관할권의 확보 등을 함을 목적으로 한다.
- 제2조(정의) 이 법에서 사용하는 용어의 뜻은 다음과 같다.
 1. "해양조사"란 선박의 교통안전, 해양의 보전·이용·개발 및 해양관할권의 확보 등에 이용할 목적으로 이 법에 따라 실시하는 해양관측, 수로측량 및 해양지명조사.
 2. "해양관측"이란 해양의 특성 및 그 변화를 과학적인 방법으로 관찰·측정하고 관련 정보를 수집하는 것을 말한다.
 3. "수로측량"이란 다음 각 목의 측량 또는 조사를 말한다.
 - 가. 해양 등 수역(水域)의 수심·지구자기(地球磁氣)·중력·지형·지질의 측량과 해안선 및 이에 딸린 토지의 측량
 - 나. 선박의 안전항해를 위하여 실시하는 항해목표물, 장애물, 항만시설, 선박편의시설, 항로 표시사항 및 유빙(流氷) 등에 관한 자료를 수집하기 위한 항로조사
 4. "기본수로측량"이란 모든 수로측량의 기초가 되는 측량으로서 제19조에 따라 해양수산부장관이 실시하는 수로측량을 말한다.
 5. "일반수로측량"이란 기본수로측량 외의 수로측량을 말한다.
 6. "해양지명조사"란 해양지명을 제정·변경 또는 관리하기 위하여 필요한 지형조사 및 문헌조사 등의 조사를 말한다.
 7. "국가해양기준점"이란 해양조사의 정확도를 확보하고 효율성을 높이기 위하여 특정 지점을 제6조제1항에 따른 해양조사의 기준에 따라 측정하고 좌표 등으로 해양조사를 할 때 기준으로 사용하는 점을 말한다.
 8. "국가해양관측망"이란 해양수산부장관이 해양관측을 하고 해양관측에 관한 자료를 수집·가공·저장·검색·표출·송수신 또는 활용할 수 있도록 구축·운영·관측시설의 조항을 말한다.
 9. "해양지명"이란 자연적으로 형성된 해양·해협·만(灣)·포(浦) 및 수로 등의 이름과 초(礁)·퇴(堆)·해저협곡·해저분지·해저산·해저산맥·해경(海鏡)·해 등 해저지형의 이름을 말한다.
 10. "해양정보"란 해양조사를 통하여 얻은 최종 결과를 말하며, 해양관측한 자료를 기초로 분석하여 얻은 해양예측정보를 포함한다.

New Concept & Point

- 1 **Marine Data Definition**
(Traditionally, marine data was result of waterway survey, focusing on cartographic production.)
- 2 **Focusing on marine information service.**
(From cartographic production to service)
- 3 **Fostering and supporting for marine information management and use, and related industry support.**

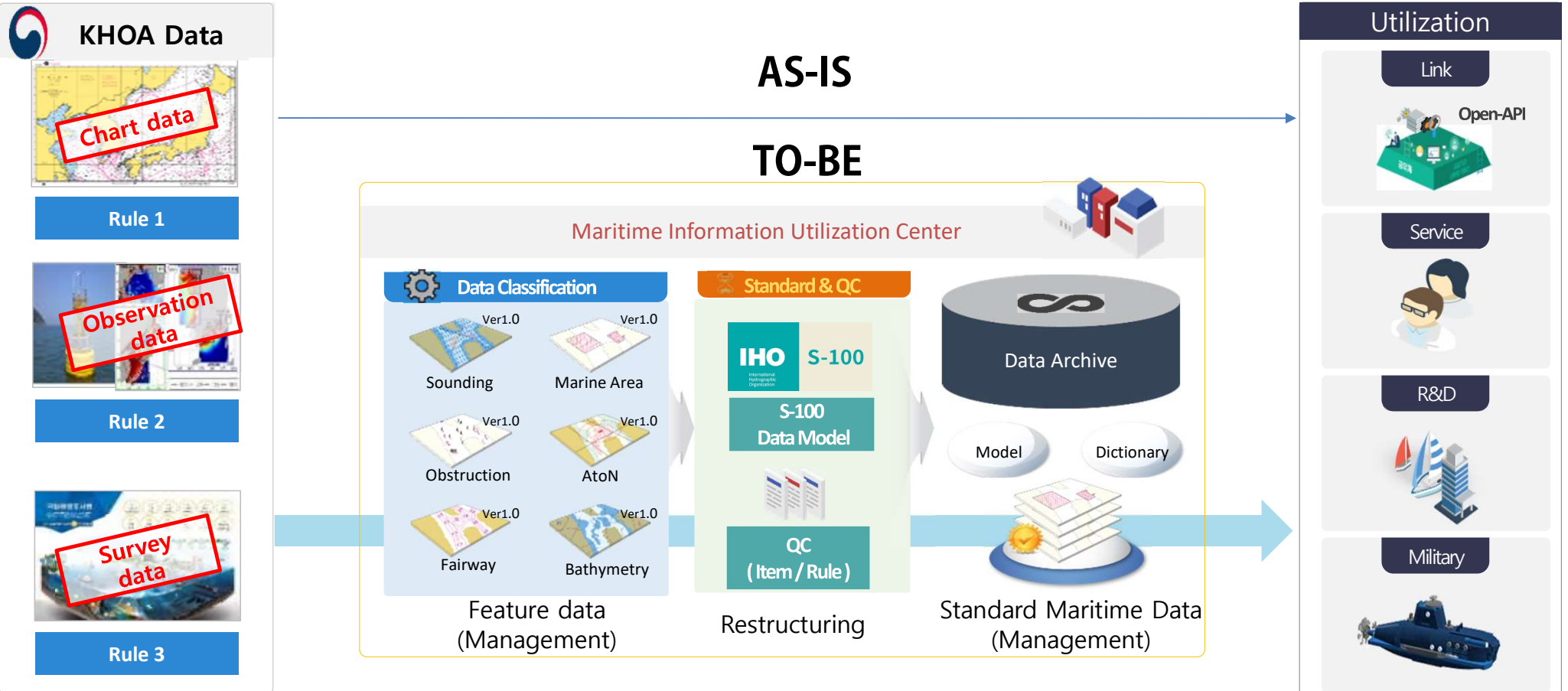
The legal basis for the management and utilization of marine data

e.g., Storage and reading, Quality control, Utilization of relevant agency information, National Maritime Information System, Marine Information Utilization Center



Purpose

To provide feature-based maritime data based on the S-100 data model



04

Marine Spatial Data Infrastructure

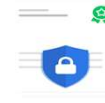
Governance

Transforming Marine Geospatial Data Collection and Management



2021

Roadmap establishment



Marine information identification and roadmap establishment

Data capture specification and data model

Data framework/system Improvement

Quality management

Product utilization

2021

2022

2023

2024

2025

Marine information identification in KHOA

Derived products review

Supply chain improvement

Data creation

Derived production

Identification of standardization targets

Supply chain management

Data framework improvement

Lifecycle management

Marine information utilization

Innovative transformation assessment

Data model (logical and physical model)

Data creation

Quality management

Automated product creation

Strategic Roadmap

Registry (mainly internal level)

Standards management



2021

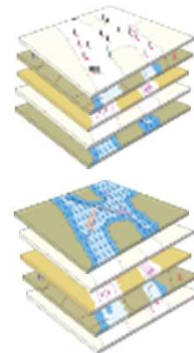
Marine Geospatial Data Collection, Metadata, and Quality Management

Marine Geospatial Information

Chart
Depth
Laws and notice Products



Feature



Standardized marine information

Metadata and Quality Management

NO	NAME	TYPE	UNIT	DESCRIPTION	STATUS	DATE	REVISION
1

(상위 요소 3종, 하위 요소 28종, 세부 요소 31종)

NO	NAME	TYPE	UNIT	DESCRIPTION	STATUS	DATE	REVISION
1

< Metadata Draft >

Code	항목명	내용	항목유형	비고
VA-1	Feature Catalog

(데이터 셋 검토항목 20종, 메타데이터 검토항목 9종)

< Data Quality Draft >

Code	항목명	내용	항목유형	비고
VA-14	시각적 정확도

Marine Information Identification

✓ Lifecycle Management

✓ ISO 19115

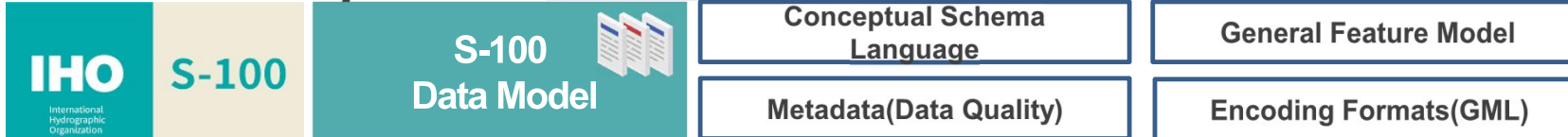
✓ Completeness

✓ Logical consistency

✓ Temporal quality

✓ Accuracy

Marine Geospatial Information based on S-100 Data Model



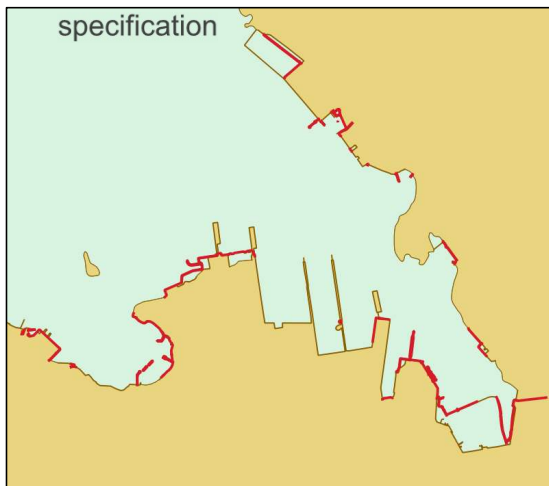


pilot
production

Lessons learned

Inconsistency of marine
basemap/data

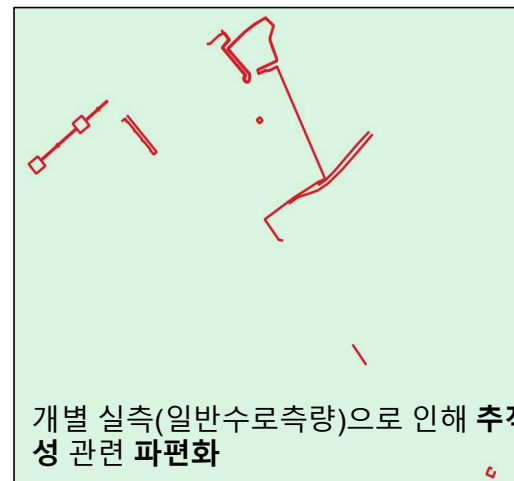
- Duplication of jobs and lack of data capture specification



Two departments in KHOA create coastlines differently. There are discrepancies between the two data sets. It is necessary to avoid duplication of jobs. In addition, the data capture specification provides clear guidance for capturing.

Fragmentation problem

- Renewal causes data fragmentation.



Defining the basemap data model and derived feature data models separately is necessary. It is essential to separate data management with derived production.

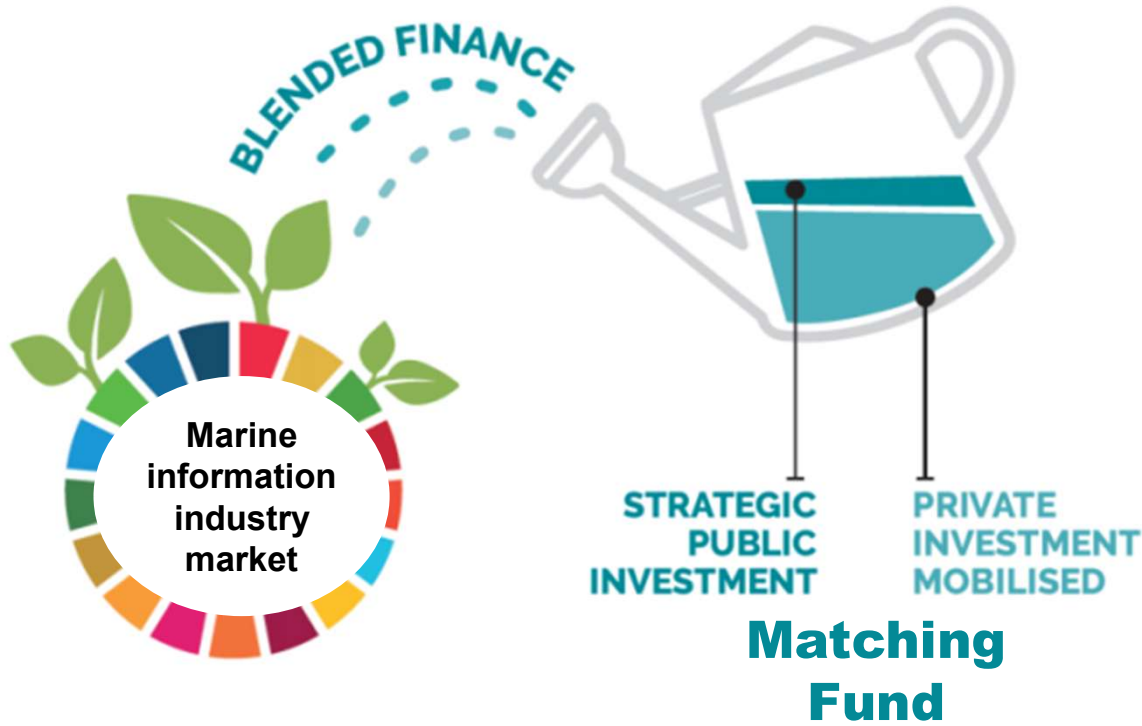


Financing



Financing

Change from public investment such as national projects to matching funds with private and local governments



➤ Indirect support method

➤ Direct support method



Business agreement signed