


Introduction to the National Marine Biodiversity Institute of Korea

National Marine Biodiversity Institute of Korea

Keyseok Choe, Hye Seon Kim and Changsu Lee

K. Choe: kschoe@mabik.re.kr; H. S. Kim: hskim99@mabik.re.kr; C. Lee: lcs1105@mabik.re.kr

Overview



Scale
Area 325,000m², Building 32,100m²

Major Facilities
Research building 8,300m² (26%), Storage 6,700m² (21%)
Exhibition hall 11,900m² (36%), Education building 5,200m² (17%)



Function

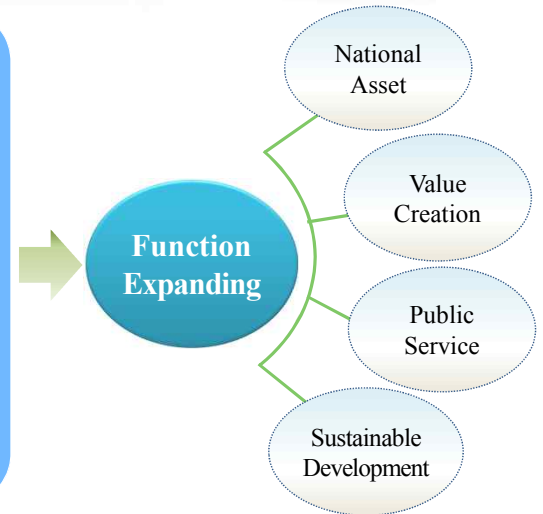
- Internal Research**
 - Sample Collection
 - Long-term Strategic R&D
- Legal Research**
 - MLRs Legal Investigation
 - Basic Legal Research
- National Resources Bank**
 - National Proliferation
 - Securing MLRs
- National R&Ds**
 - MLRs Reservation
- Donation Program**
 - MLRs Donation

Collection & Reserve

MABIK

National Authority
Marine living resources under the Nagoya Protocol regime
Efficient conservation of marine living resources

Executive Agency
Conserving marine living resource
Using those resources in a sustainable way



Operations & Facilities

Research & Storage

- Collection/Preservation/Utilization of marine life
- Academic research/study on marine life
- Professional preservation system equipped with temp., humidity, and disaster prevention controls



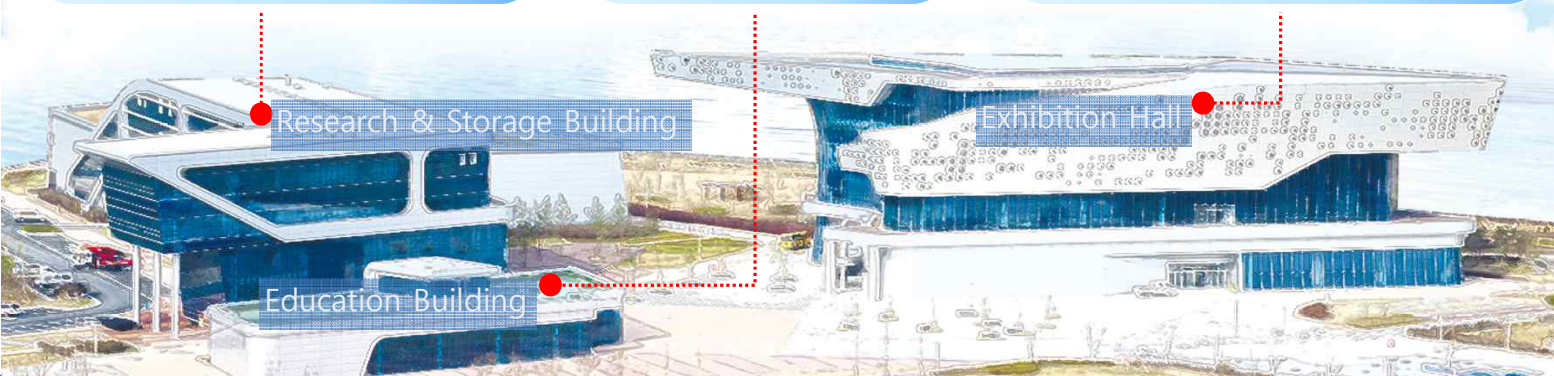
Education

- Deliver knowledge and information on marine life
- Promote understanding about effective utility of marine life resources



Exhibition

- Permanent/Special exhibition of marine living organisms
- The Seed Bank : MABIK symbolic structure for the Marine Biodiversity



MABIK Marine Biodiversity Conservation Project

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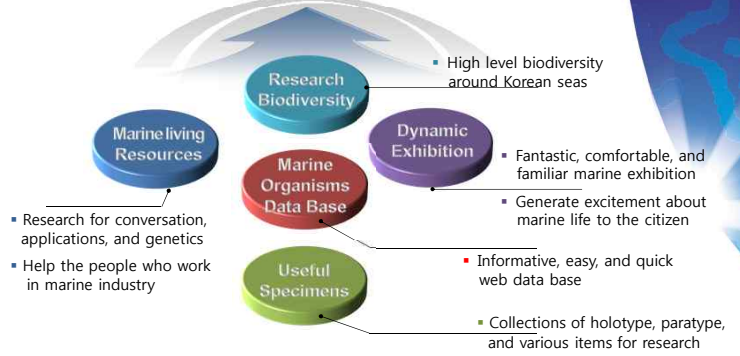
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Background

How many marine species in Korea?

- According to documentary survey, the marine species occurring in Korean waters account for about 25.4% (9,534) of total species (MLTM, 2007)
- The number of marine species is significantly lower than that of terrestrial species but much more diverse (34 phyla and 83 classes)

VISION : Placing value on marine bioresources for a new future



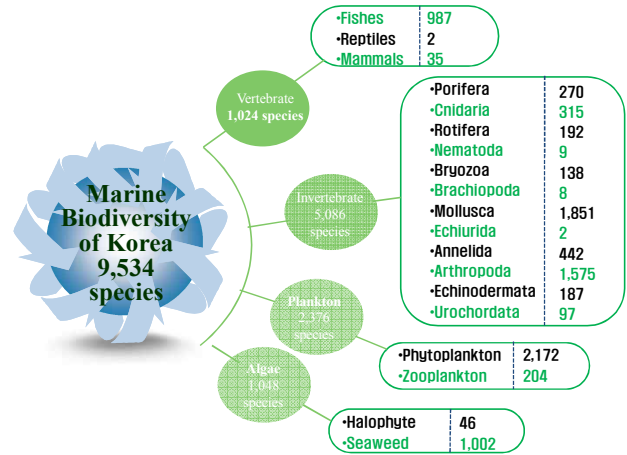
Current Status: Marine Biodiversity of Korea

Table 1. The NBC regions seabed area and volume, total eukaryotic species richness, and richness per area (multiplied by 1,000 for presentatio) purposes).

NBC region	No. species	Seabed area km ²	Sea volume km ³	species/area
Alaska ¹	5305	1,654,504	8,668,714	1.6
Arctic ²	8,208	21,986,158	70,632,364	0.4
Atlantic Europe ³	12,270	3,575,685	4,933,917	3.4
Australia ⁴	32,889	6,819,301	15,272,883	4.8
BABC ⁵	5,863	491,218	26,203	14.3
East Africa ⁶	8,001	2,228,409	4,379,946	3.6
Caribbean ⁷	32,018	3,223,113	2,260,799	0.9
Caribbean ⁸	3,160	823,798	705,744	3.8
Caribbean ⁹	2,636	317,203	271,883	8.3
Caribbean ¹⁰	12,046	2,828,125	2,218,147	4.3
China ¹¹	22,385	871,966	66,825	26.9
Gulf of Mexico ¹²	15,374	1,518,067	2,344,179	10.1
Hawai ¹³	8,544	2,628,409	4,379,946	3.4
Northwest Europe ¹⁴	10,186	3,122,389	4,424,076	3.3
Japan ¹⁵	32,777	3,679,743	14,721,516	8.9
Mediterranean ¹⁶	16,848	2,451,059	3,833,073	6.9
New Zealand ¹⁷	12,780	4,073,885	10,004,545	3.1
Patagonian Shelf ¹⁸	3,378	2,683,614	2,264,273	1.4
SA Trop West Atlantic ¹⁹	2,743	664,308	1,420,080	4.5
South Africa ²⁰	12,015	846,463	1,792,244	13.3
South Korea ²¹	16,601	366,619	166,270	32.9
West Pacific ²²	6,816	462,946	2,463,107	1.4
USA California ²³	10,180	1,653,172	1,933,718	9.6

Costello et al., 2010 (PLOS One)

- Higher biodiversity
- 32 species/area



Process of Specimen Productions

1. Field Sampling



2. Preparation



3. Identification



4. Specimen Production



5. Barcode

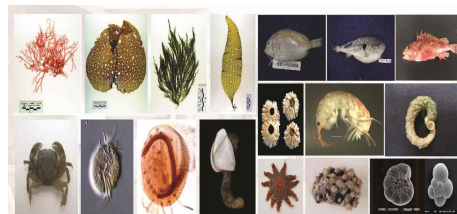
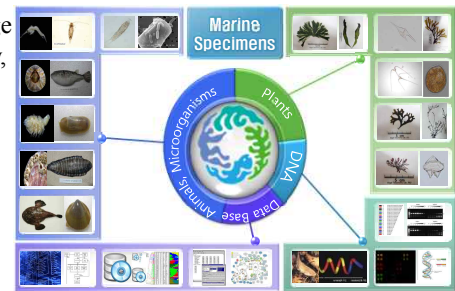


6. Storage



Collection of Marine Species & Goal

- Marine biodiversity research, storage of specimens for phylogenetic study, supporting marine bio-industry
- The donation program of marine organisms : Specimens, book or Paper, etc.
- Available on the web for collection Information : www.mabik.re.kr



- Collections during the last 5 years:

450,029 specimens from various taxonomic groups including approximately vertebrates, invertebrates, algae, micro-organisms

Long-term Roadmap

Opening Phase ('14-'15)	Development Phase ('16-'20)	Leap Forward Phase ('21-'30)
5,000 species 600,000 specimens	12,000 species 1,350,000 specimens	20,000 species 3,500,000 specimens