Current Status, Policies and Challenges for Marine Protected Areas in Korea

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I. Legislations for Coastal & Marine Protected Area in Korea

II. Marine Protected Areas in Korea

III. Challenges for Future MPAs Management in Korea
I. Legislations for C. & M. Protected Area in Korea

❖ Brief History of Coastal & Marine PAs Management

- ’68~’88 Coastal & Marine National Parks
- ’75~’82 Fisheries Resources Protected Areas
- ’96~’98 Bird Habitats
- ’00~’04 Uninhabited Protected islands
- ’01~ Coastal Wetland Protection Areas
- ’05~ Protected Marine Areas

1968 Establishment of institutional mechanism

1996 Broadening of policy scope

2000 Ecosystem-based Approach Introduced

- Lack of follow-up actions afterward designation
- Land-based approach (extension of land NP)

❖ Introduction of a comprehensive ocean management system (MOMAF)
❖ Revision of legal & institutional mechanism for C & M PAs
❖ National Plans & Policies

❖ Expansion of MPAs’ areas
❖ Episodic Implementation
❖ Surveys to support decision-making
❖ Public awareness on coastal wetland protection
I. Legislations for C. & M. Protected Area in Korea

- Legal and Institutional mechanisms (4 ministries & 9 laws)

**MLTM**
- (Land, Transport and Maritime Affairs)
  - Marine Environment Management Act (Marine Environment Conservation Area)
  - Conservation & Management of Marine Ecosystem Act (Marine Protected Area)
  - National Land Planning and Utilization Act (Fisheries Resource Protected Area / MIFAFF)
    *MIFAFF : Min. for Food, Agriculture, Forestry and Fisheries*

**ME**
- (Environment)
  - Wetland Conservation Act (coastal/inland protect. Area)
  - Natural Environment Conservation Act (Ecosystem/Landscape Conserv. Area)
  - Wildlife Act (Wildlife Protection Area)
  - Natural Park Act (National Park)
  - Special Act on Islands (Special Island)

**CHPA**
- (Cultural Heritage Protection Admin.)
  - Cultural Heritage Protection Act (Natural Heritage)
I. Legislations for C. & M. Protected Area in Korea

Shinduri sand dune

Woose-do (island)
Uninhabited islands for special protection

Protected Marine Area
(MLTM)

Natural Heritage
(CHPA)

Buffer zone for Natural Heritage

Wetland Protection Area
(ME)

Managed by ME

Managed by MLTM
# I. Legislations for C. & M. Protected Area in Korea

## Coastal and Marine Protected Areas

<table>
<thead>
<tr>
<th>Name</th>
<th>No.</th>
<th>Area (km²)</th>
<th>Ministry</th>
<th>Acts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Marine Area</td>
<td>6</td>
<td>219.0</td>
<td>MLTM</td>
<td>Conserv. &amp; Manag. of Marine Ecosystem Act</td>
</tr>
<tr>
<td>Wetland Protection</td>
<td>12</td>
<td>141.4</td>
<td>MLTM</td>
<td>Wetland Protection Act</td>
</tr>
<tr>
<td>Marine Environment Conservation</td>
<td>4</td>
<td>1,882.1</td>
<td>MLTM</td>
<td>Marine Environment Conservation Act</td>
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<tr>
<td>Fisheries Resource Protection</td>
<td>10</td>
<td>3,034.6</td>
<td>MLTM, MIFAFF</td>
<td>National Land Planning and Utilization Act</td>
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<tr>
<td>Special Island</td>
<td>167</td>
<td>10.5</td>
<td>ME</td>
<td>Special Act on the Ecosystem Preservation of Islands including Dokdo Island</td>
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<td>National Park</td>
<td>4</td>
<td>3,348.4</td>
<td>ME</td>
<td>Natural Park Law</td>
</tr>
<tr>
<td>Ecosystem/Landscape Conservation</td>
<td>3</td>
<td>34.6</td>
<td>ME</td>
<td>Natural Env. Conserv. Act</td>
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<tr>
<td>Wildlife Protection</td>
<td>166</td>
<td>207.8</td>
<td>ME</td>
<td>Wildlife Protection Act</td>
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<tr>
<td>Natural Heritage</td>
<td>193</td>
<td>1,126.4</td>
<td>CHPA</td>
<td>Cultural Heritage Protection Act</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>565</td>
<td><strong>10,004.7</strong></td>
<td></td>
<td>10.1% of national land area(99,514 km²)</td>
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<tr>
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<td></td>
<td></td>
<td>14.1% of national territorial sea area(71,000 Km²)</td>
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</tbody>
</table>
II. Marine Protected Areas in Korea

**Protected Marine Areas**
- **Conservation and Management of Marine Ecosystem Act**
  - Chapter IV. Designation and Management of Protected Marine Areas
  - Article 25-38(Designation, Management, Restriction, Obs., Supports for Residents in MPAs, etc)

**Coastal Wetland Protection Area (Tidal-flat)**
- **Wetlands Conservation Act**
  - Chapter II. Conservation and Management of Wetlands
  - Article 8-18(Designation, Management, implementation of Convention, Restriction on Activities, Entry & Access, etc)
II. Marine Protected Areas in Korea

❖ Baseline Monitoring for Marine Ecosystem

1) National Investigation on Marine Ecosystem (1st Phase since 2006)

<table>
<thead>
<tr>
<th>Environment</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benthic (Sediment, Rock, etc)</td>
<td>General Environ. Condition</td>
</tr>
<tr>
<td></td>
<td>Benthos</td>
</tr>
<tr>
<td></td>
<td>Sea-weeds, algae, plants</td>
</tr>
<tr>
<td>Pelagic Environ.</td>
<td>General Environment Cond.</td>
</tr>
<tr>
<td></td>
<td>Phytoplankton</td>
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<tr>
<td></td>
<td>Zooplankton</td>
</tr>
<tr>
<td>Nekton</td>
<td>Fish, cephalopods, Crustacea, etc</td>
</tr>
</tbody>
</table>

- Taxonomy /Distribution
- Biomass, Diversity, Richness, etc
- Bio-diversity Hotspot
- Seasonal Obs.

Conservation and Management of Marine Ecosystem Act
(Protected Marine Area)
II. Marine Protected Areas in Korea

❖ Baseline Monitoring for Marine Ecosystem
  2) National Monitoring on Coastal Wet-lands (2nd Phase since 2008)

- Taxonomy / Distribution
- Sediment (tidal-flat) Quality Condition
- Biomass, Diversity, Richness, etc

Wetland Conservation Act
(Wetland Protection Area)
II. Marine Protected Areas in Korea

Areas for Protecting Organisms, Ecosystems, Landscape

- Protected Marine Areas
  - habitat or spawning area of organisms (species) under protection
  - higher Primary production or biodiversity
  - ecosystem vulnerable to damages

- Coastal Wetland Protection Area (Tidal-flats)
  - unique geological/geomorphic features (scientific research and monitoring)
  - extraordinary scenic, topographic value
II. Marine Protected Areas in Korea

Marine Protected Area: 360.31 km² (0.5% of Territorial Sea Area)

- Coastal Wetland Protection Area(12): 218.96 km² (10.1 % of tidal-flat area)
- Protected Marine Area(6): 141.354 km²
- Ramsar Site(5): 142.2 km² (56.3 % of Wetland P. Area)
## II. Marine Protected Areas in Korea

### Priority for MPA management Policy

<table>
<thead>
<tr>
<th>Type</th>
<th>No</th>
<th>Designated Name</th>
<th>IUCN Category</th>
<th>Natural Environment</th>
<th>Social Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Marine Areas</td>
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<tr>
<td></td>
<td>1</td>
<td>Sinduri Sand Dune Waters</td>
<td>V</td>
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<tr>
<td></td>
<td>2</td>
<td>Mun-sum &amp; Neighboring Waters</td>
<td>IV</td>
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<td></td>
<td>3</td>
<td>Oryuk-do &amp; Neighboring Waters</td>
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<td>4</td>
<td>Daeijak-do &amp; Neighboring Waters</td>
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<td>5</td>
<td>Gageo-do &amp; Neighboring Waters</td>
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<td></td>
<td>6</td>
<td>Sohwa-do &amp; Neighboring Waters</td>
<td>IV</td>
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<tr>
<td>Coastal Wetland Protect. Areas</td>
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<tr>
<td></td>
<td>1</td>
<td>Muan Tidal Flat Ramsar Site</td>
<td>V</td>
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<tr>
<td></td>
<td>2</td>
<td>Jindo-do Tidal Flat</td>
<td>V</td>
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<td></td>
<td>3</td>
<td>Suncheon Bay Tidal Flat (Ramsar Site)</td>
<td>V</td>
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<td></td>
<td>4</td>
<td>Boseong Beolgyo Tidal Flat (Ramsar Site)</td>
<td>V</td>
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<td>5</td>
<td>Ongjin Jangbong-do Tidal Flat</td>
<td>V</td>
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<td>6</td>
<td>Buan Julpo Bay Tidal Flat (Ramsar Site)</td>
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<td>7</td>
<td>Gochang Tidal Flat (Ramsar Site)</td>
<td>V</td>
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<td>8</td>
<td>Soecheon Tidal Flat (Ramsar Site)</td>
<td>V</td>
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<td>9</td>
<td>Song-do Tidal Flat</td>
<td>V</td>
<td></td>
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<td></td>
<td>10</td>
<td>Jeong-do Tidal Flat (Ramsar Site)</td>
<td>V</td>
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<td></td>
<td>11</td>
<td>Masan Bay Bongam Tidal Flat</td>
<td>V</td>
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<tr>
<td></td>
<td>12</td>
<td>Siheung Tidal Flat</td>
<td>V</td>
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</table>

**Legend:**
- **Critical**
- **Important**
- **Normal**
II. Marine Protected Areas in Korea

❖ MPA Network in Korea

Establishing a responsible & coordinating organization for MPA Management (May 2008) at a national level

- **Management and Assessment**
  - Annual Assessment of MPA Management Activities
    (Coordinating local practices & Documentation)

- **Research and DB Establishment**
  - Scientific Research & Monitoring
  - DB Establishment

- **CEPA**
  - Public Awareness Raising Program
    (Web-service, Publications & Events)
  - Education
  - Network (Visiting Center, Fishing Village, Shorebird etc)

*KOEM*
Korea Marine Environment Management Corporation
II. Marine Protected Areas in Korea

- International MPA Network

  MLTM/NOAA MPA Capacity Building Project

  - Internship Program (2009~2010) : Information sharing and learning experience
  - Training Workshop
    * MPA Management Plan (‘11) / Sustainable Tourism in MPAs (‘12)

MoU between MLTM and Wadden Sea (2009~)

  - Co-Scientific Research (Tidal-flat Monitoring, Shorebirds watching)
  - Exchange Program : Symposium (Workshop), Training Workshop
III. Challenges for Future MPA Management in Korea

Formulation of Conflict Management System

- Establishment of National Management Committee for C. and Marine MPAs
  * MLTM, ME, CHPA, local governments, NGOs, etc.

- Developing Assessment Framework for Management Prioritization
  * application of *Ecological Continuum* Concept at Coastal Regions
  * development of procedure, criteria and application of the prioritization

Target-based Management

- Ambiguous and abstract designation criteria
  * mixture of management categories ⇒ application of *zoning system* in multiple-use MPAs

- Application of No-net Loss policy to Coastline and Habitat Protection
  * stricter approval procedure for development (e.g. reclamation)

<table>
<thead>
<tr>
<th>Areas managed mainly for:</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
</tr>
</thead>
<tbody>
<tr>
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<td><strong>are</strong></td>
<td><strong>er</strong></td>
<td><strong>con</strong></td>
<td><strong>serv</strong></td>
<td><strong>cons</strong></td>
<td><strong>sust</strong></td>
</tr>
<tr>
<td>I</td>
<td>Strict protection [la] Strict nature reserve and [Ib] Wilderness area</td>
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<tr>
<td>II</td>
<td>Ecosystem conservation and protection (i.e., National park)</td>
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<tr>
<td>III</td>
<td>Conservation of natural features (i.e., Natural monument)</td>
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<tr>
<td>IV</td>
<td>Conservation through active management (i.e., Habitat/species management area)</td>
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<tr>
<td>V</td>
<td>Landscape/seascape conservation and recreation (i.e., Protected landscape/seascape)</td>
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<tr>
<td>VI</td>
<td>Sustainable use of natural resources (i.e., Managed resource protected area)</td>
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</tr>
</tbody>
</table>
III. Challenges for Future MPA Management in Korea

Enhancing Public Participation & Voluntary Activities

- Limited Local Pools
  * most residents in/adjacent to MPAs are engaged in fisheries and agriculture
  * very limited number of young people

- Encourage public participation from planning process of management plan
  ..........  
  * developing site-specific supporting system with real benefits to the local