



MAB Strategy and Sustainable Development in the Biosphere Reserves of Republic of Korea

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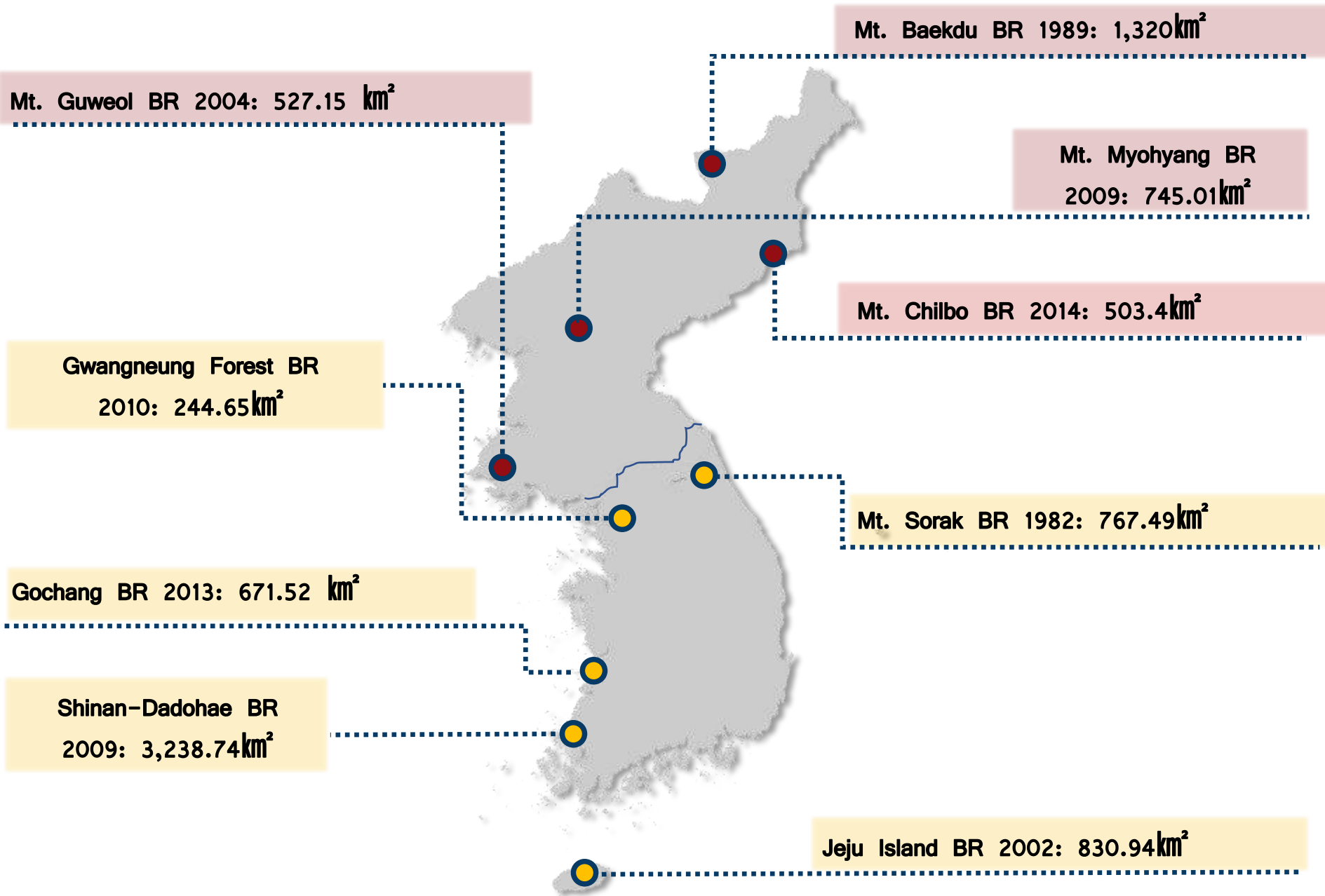
Summary

1

Biosphere Reserves of The Republic of Korea



Biosphere Reserves in the Korean Peninsula (ROK and DPRK)



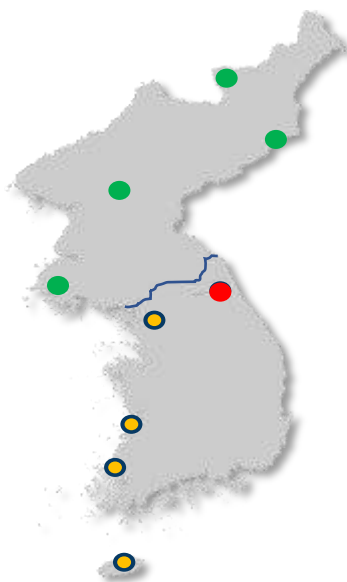
Mt. Sorak BR:

1982: 393.49 km²

2016: 767.49 km² (Extended)

Mount Sorak National Park as core area

Mountainous ecosystem

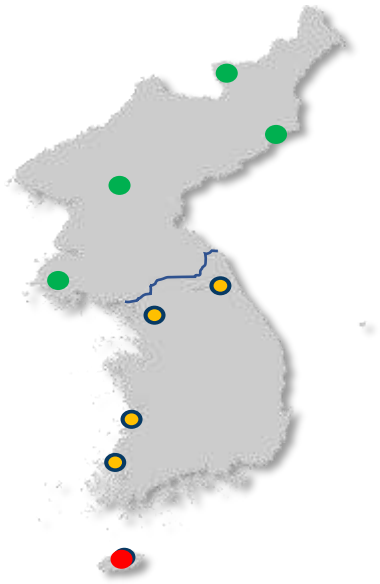


Jeju Island BR:

2002: 830.94 km²

Mount Hallasan National Park as core area

Mountainous and marine ecosystem



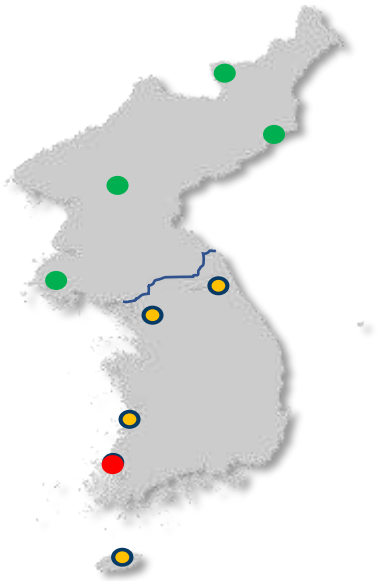
Shinan Dadohae BR:

2009: 573.12 km²

2016: 3,238.74 km² (Extended)

Dadohae National Park and Shinan Tidal-Flat
Provincial Park as core area

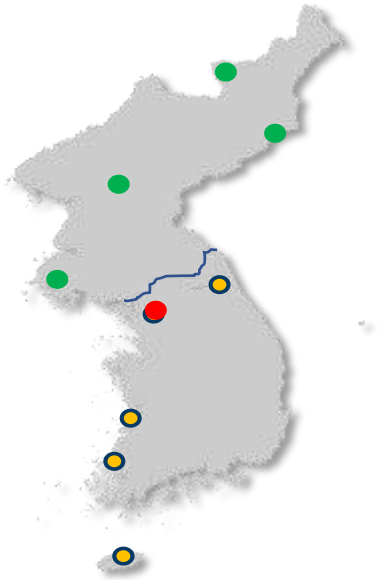
Island and Marine ecosystems



Gwangneung Forest BR:

2010: 244.65 km²

Gwangneung National Arboretum and
Gwangneung Royal Tomb as core area
Mountainous and agricultural ecosystem



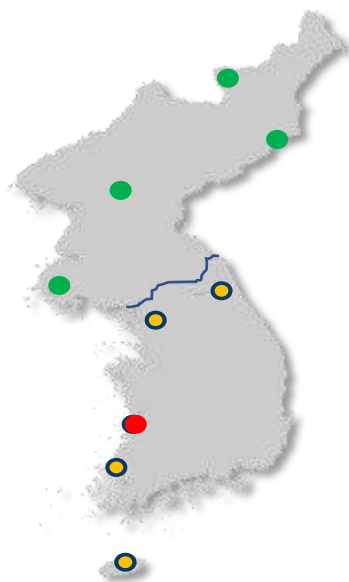
Gochang BR:

2013: 671.62 km²

Seonunsan Provincial Park and

Gochang Tidal-flat Ramsar Site as core area

Mountainous, agricultural, coastal and marine ecosystems

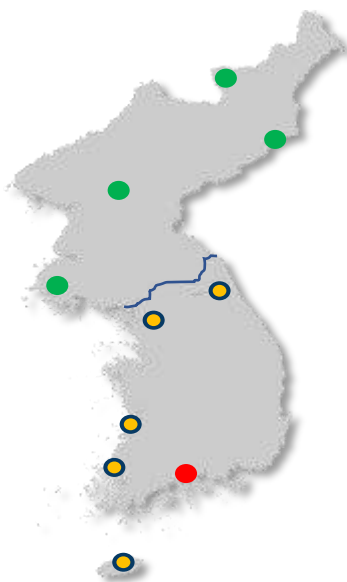


Suncheon BR (nominated):

2017 (nomination document submitted): 938.40 km²

Jogyesan Provincial Park and Suncheon Bay Ramsar Site as core area

Mountainous, agricultural, and coastal ecosystems



Brief History of the BRs in ROK



Year	Events
1974	The first MAB project launched by the Korean National Commission for UNESCO (publication of translated MAB report series)
1980	Establishment of the MAB National Committee of ROK under the Korean National Commission for UNESCO
1982	Designation of the first BR - Mt. Sorak BR
1995	Establishment of the East Asian Biosphere Reserve Network (EABRN)
1996	Survey for the application of the BR concept in the region adjacent to the Korean Demilitarized Zone (DMZ) by the Min. of Environment
2001	Creation of the DMZ TBR initiative as a governmental policy
2002	Designation of the Jeju Island BR
2006	Launching of the Jeju Initiative for the island and costal BR cooperation by the Jeju Special Self-governing Province
2009	Designation of the Shinan Dadohae BR
2010	Professor Chung-II Choi elected as the Chair of MAB ICC
2010	Designation of the Gwangneung Forest BR
2011	Transfer of the Korean MAB Committee to the Korea National Park Service under the Ministry of Environment
2012	Deferral decision on the DMZ BR application at the UNESCO MAB ICC
2013	Creation of the legal articles to enable financial support for the BR in the Natural Environment Conservation Act
2013	Designation of the Gochang BR
2015	Establishment of National MAB Strategy and Action Plans for Korean BRs
2017	Suncheon BR was nominated for 6 th BR of ROK



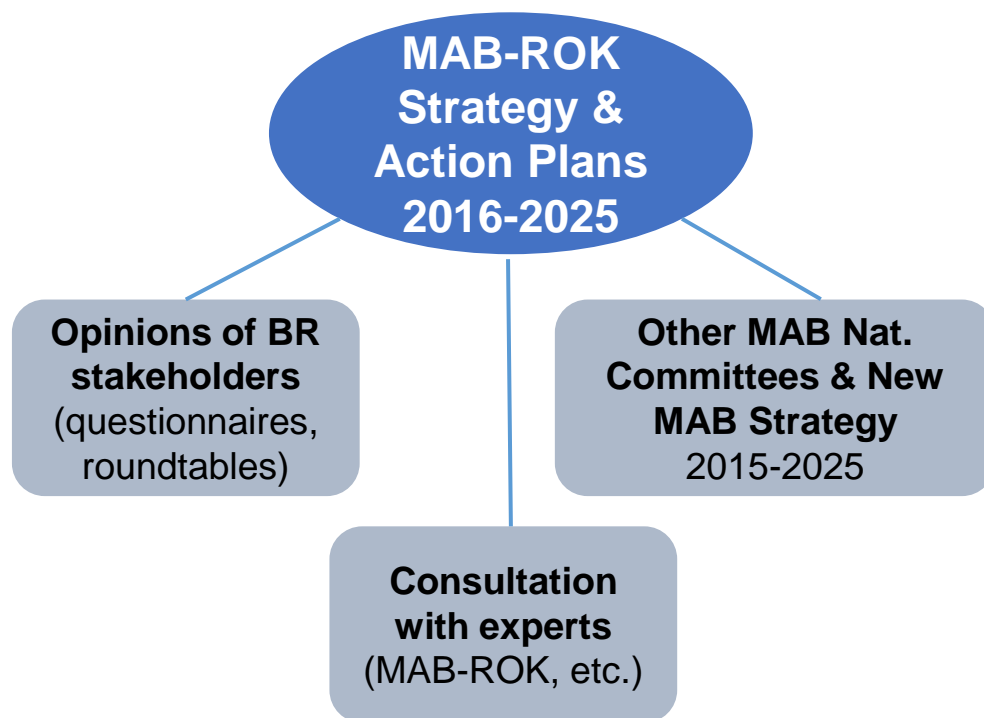
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MAB Strategy and Action Plans for Biosphere Reserves in the Republic of Korea

ROK MAB Strategy & Action Plans

□ ROK Strategy and Action Plans for MAB 2016-2025

- First document as its kind for establishing directions and priority actions in Korea
- Prepared for: June 2014 – Aug. 2015
- Adopted at the MAB-ROK meeting on 4 Sept. 2015
- Documents available in Korean & English



❑ ROK Strategy and Action Plans for MAB 2016-2025

✓ Contents

1. Introduction

2. Vision and Missions

3. Objectives and Expected Results

4. Action Plans

5. Evaluation

Annex : Glossary

❑ ROK Strategy and Action Plans for MAB 2016-2025

[5 Objectives]

1. Strengthen the management system for conservation and enhancement of biodiversity and ecosystem services
2. Construct and disseminate a model for sustainable social and economic development in which human beings and the biosphere can co-exist in harmony
3. Strengthen education for sustainable development while enhancing local community capacity and increasing awareness on biosphere reserves
4. Expand institutional frameworks for MAB and biosphere reserves and contributions to the international community
5. Promote effective communication, participation, and cooperation

❑ ROK Action Plans for MAB 2016-2025

[Objective 1] Strengthen the management system for conservation and enhancement of biodiversity and ecosystem services: 8 Actions

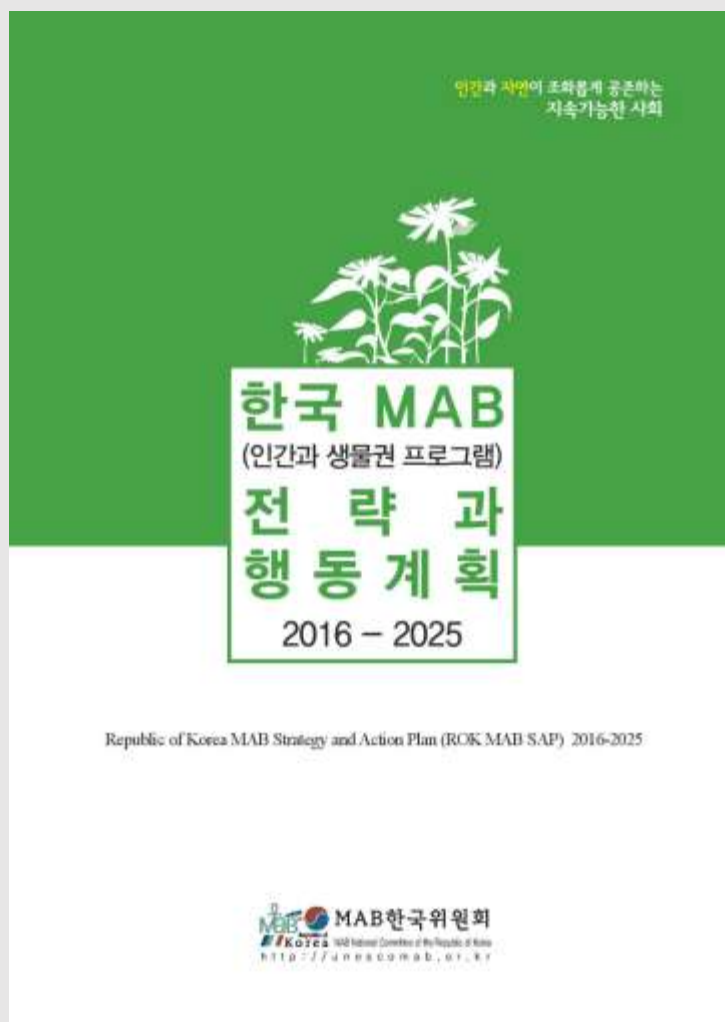
1. Devise methods for dealing with major threats against biodiversity in core areas
2. Carry out research on the effects of climate change on biosphere reserve ecosystems
3. Develop and implement an index for evaluating ecosystem services and social and cultural affairs
4. Post on the MAB ROK website a list of investigation and research activities carried out on domestic biosphere reserves
5. Include the current status of biodiversity and conservation methods in an [annual report](#) submitted by each BR to the MAB ROK
6. Conduct comprehensive research on the current status of biosphere reserve ecosystems and cultural resources
7. Publish data on the ecosystem, including fauna and flora of all biosphere reserves and/or of each biosphere reserve
8. Support fully research and monitoring on biodiversity in biosphere reserves

❑ ROK Action Plans for MAB 2016-2025

[Objective 2] Construct and disseminate a model for sustainable social and economic development: 8 Actions

1. Provide exchange opportunities such as a national biosphere reserve forum in order to share information and experiences on the sustainable regional economic projects
2. Actively encourage the establishment and operation of **social enterprises** and cooperative associations
3. Provide education programs and professional consultations for revitalization of local economies
4. Create **legal and institutional frameworks** in order to provide financial and administrative support
5. Allow comprehensive access to information about products and services from domestic biosphere reserves on the website of the MAB ROK
6. **Develop a joint business model** to provide products and services connecting domestic biosphere reserves
7. Actively encourage and support a system for reinvesting profits gained from local economy revitalization projects that use biosphere reserve brands
8. Establish and implement **guidelines** for domestic biosphere reserve branding efforts

Cover Pages of ROK MAB Strategy and Action Plan 2016-2025



ROK MAB BR Guidelines

Need of institutional framework

- ✓ Numbers of applied & designated BRs and their activities are increasing.
- ✓ Need official & systematic institutional framework & procedure for the national use.

National
guidelines for **BR**
criteria and
application

2015

- Criteria for candidate BRs
- Application procedure (including national process)
- Application documents (national, international)
- Korean translated terms related to BR, etc.

3

Sustainable Development in Shinan Dadohae Biosphere Reserve (SDBR)



Introduction to Shinan Dadohae Biosphere Reserve

- **Name: Shinan Dadohae Biosphere Reserve**
- **Designation: May 2009**
- **Area: Total 57,312 ha in 2009**
- **Extended Area: Total 327,874 ha in 2016**
- **Core area: 20,999 ha, Buffer zone: 125,214 ha , Transition area: 177,661 ha (marine core area: 19,196 ha, marine buffer zone: 123,495 ha, marine transition area: 115,341 ha)**
- **Managing organization: Depart. of Environment, Shinan County**
- **Legal Status: Biosphere Reserve Ordinance of Shinan County**
- **Central Government: Ministry of Environment (Natural Parks Act), Ministry of Oceans and Fisheries (Marine Provincial Parks)**

Shinan Dadohae BR: Characteristics

- **Initially** 4 administration units of Shinan County was designated for BR in 2009
- **Now whole area** of the Shinan County including 14 administration units is included in the BR extended in 2016
- Managed by **Ordinance of Shinan County** and **Ordinance of Jollanamdo Province**
- **Local business** for ecotourism
- Many activities by local people such as ecosystem monitoring, ecosystem restoration, and sales of local products using SDBR logo.



Shinan Dadohae BR: Zonation

Total Size: 3,238.74km²

Size: 209.99km² (6.5%)

Core Area
Natural Monument, National Park, National Marine Protection Area, and Provincial Park

Size: 1,252.14km² (38.7%)

Buffer Zone
PAs and Tidal Flats & Marine Areas

Size: 1,776.61km² (54.8%)

Trans. Area
Resident and Marine Areas

Terrestrial and Marine Areas of Gageo, Heuksan, Hongdo, Uido, and Tidal Flat Areas in Bigueum, Docho, Haeui, Shineui, Jangsan, Anjiwa, Amtae, Jido, Jeungdo

Terrestrial and Marine Areas of Gageo, Heuksan, Hongdo, Uido, and Tidal Flat Areas in Bigueum, Docho, Haeui, Shineui, Jangsan, Anjiwa, Amtae, Jido, Jeungdo

Terrestrial Areas in Shinan County and Marine Areas



Legend

- Terrestrial Core Area
- Terrestrial Buffer Zone
- Terrestrial Transition Area
- Marine Core Area
- Marine Buffer Zone
- Marine Transition Area
- Tidal Flat Core Area
- Tidal Flat Buffer Zone

0 7 14 35 70km



Core Areas of SDBR



Dadohae National Park

Shinan Tidal-Flat ►

Provincial Park



신 안 군
(新 安 郡)

Shinan Dadohae BR: Aerial View

Jangdo Ramsar Wetland



Wuido Sand Dune



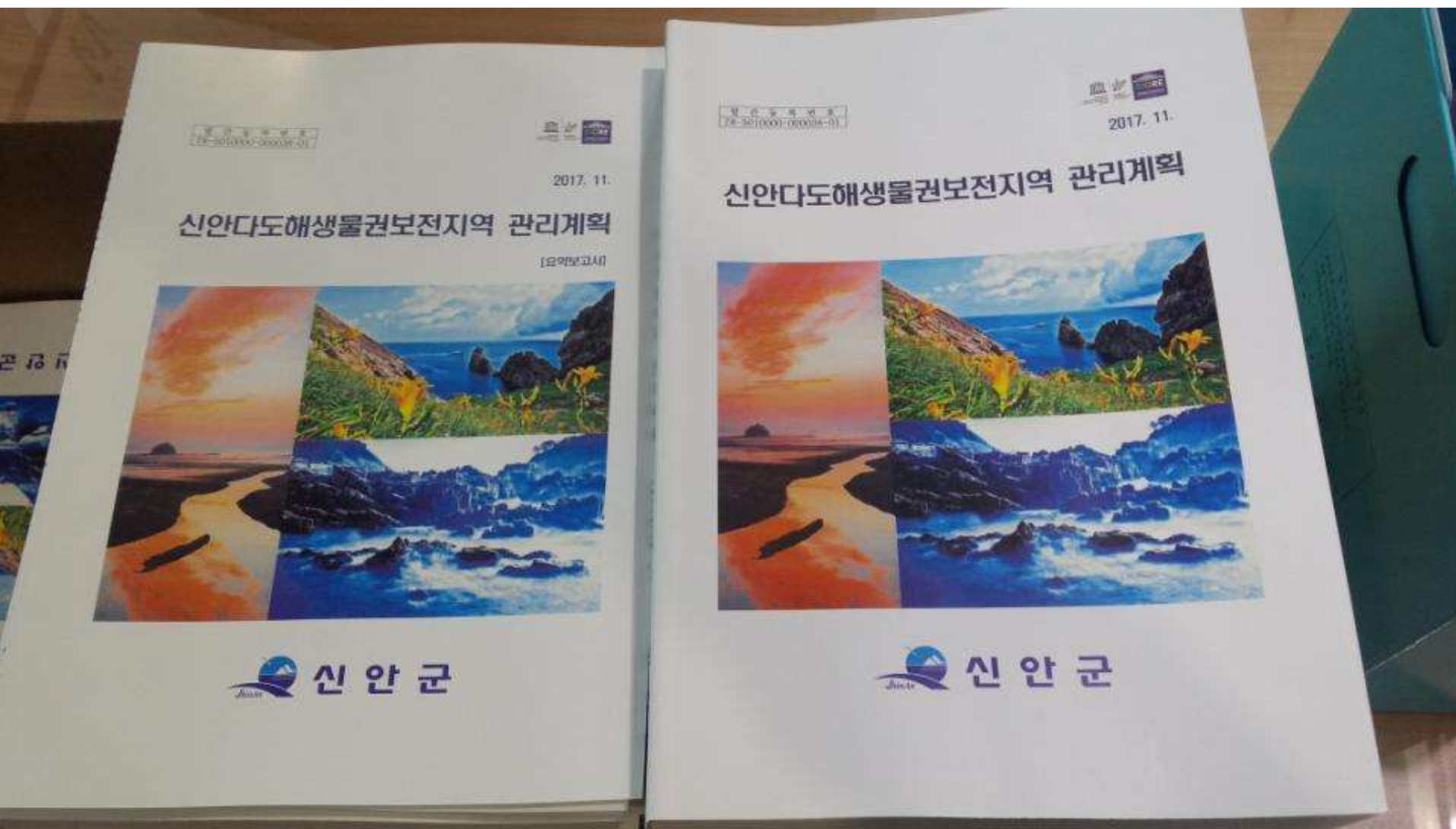
□ Management of Shinan Dadohae BR

- 2017. 06. 20: Ordinance of SDBR was amended
- 2017. 06. 20: Regulation on Application of SDBR logo was established
- 2017. 11. 06: Meeting of SDBR Management Committee: for use of SDBR logo



□ Recent activities within SDBR

- New Management Plan of SDBR was established in 2017



☐ Restoration of Chilbaldo Marine Bird Habitat by Local People and Experts



□ Capacity Building: Monitoring of biodiversity in Wuyido Sand Dune by local people



☐ Promotion of Sales of Local Products Using BR Logo



□ Local Businesses: Local Ecotour Company

- A tour company founded by local community in Shinan Dadohae BR as social enterprise
 - eco-tour & experiences of tidal flat, salt farms, digging out clams, etc.



□ New Designations of Getbol (Tidal Flat) Provincial Park

- Initial Designation: 12.824km² – 1 Myeon (Jeungdo) (2008. 06. 05)
- 1st Extension: 144.0km² – 10 Myeons (2013. 12. 31)
- 2nd Extension: 162.0km² – 13 Myeons (2018. 2.8)
- Now, Total 18km² (Terrestrial 0.737km², Mud-flat 161.263km²)



□ Promotion of Shinan
Dadohae Biosphere Reserve



4

Sustainable Development in Gochang Biosphere Reserve



Introduction to Gochang Biosphere Reserve

- **Name: Gochang Biosphere Reserve**
- **Designation: May 28, 2013**
- **Area: Total 67,152 ha (Marine area: 6,379 ha)**
- **Core area: 9,128 ha, Buffer zone: 26,554 ha , Transition area: 31,470 ha (marine core area: 4,109 ha, marine buffer zone: 2,270 ha)**
- **Managing organization: Office of Biosphere Reserve Conservation**
- **Legal Status: Biosphere Reserve Ordinance of Gochang County**
- **Central Government: Ministry of Environment (Natural Parks Act), Cultural Heritage Administration (Dolmen Historic Site)**

Gochang BR: Characteristics

- **Whole area** of the county was designated as a BR (in 2013) – **initiative of the local government** of BR application
- **Separate BR management department** (BR center) established with 8 full-time staff in Jan. 2015
→ **integrate with local conservation policies**
- **Local environment association** for promoting local awareness & participation (2014)
- Many projects in planning & preparation (ecotourism, brand marketing, education, etc.)





Gochang BR: Zonation

Core area : 91.28km²

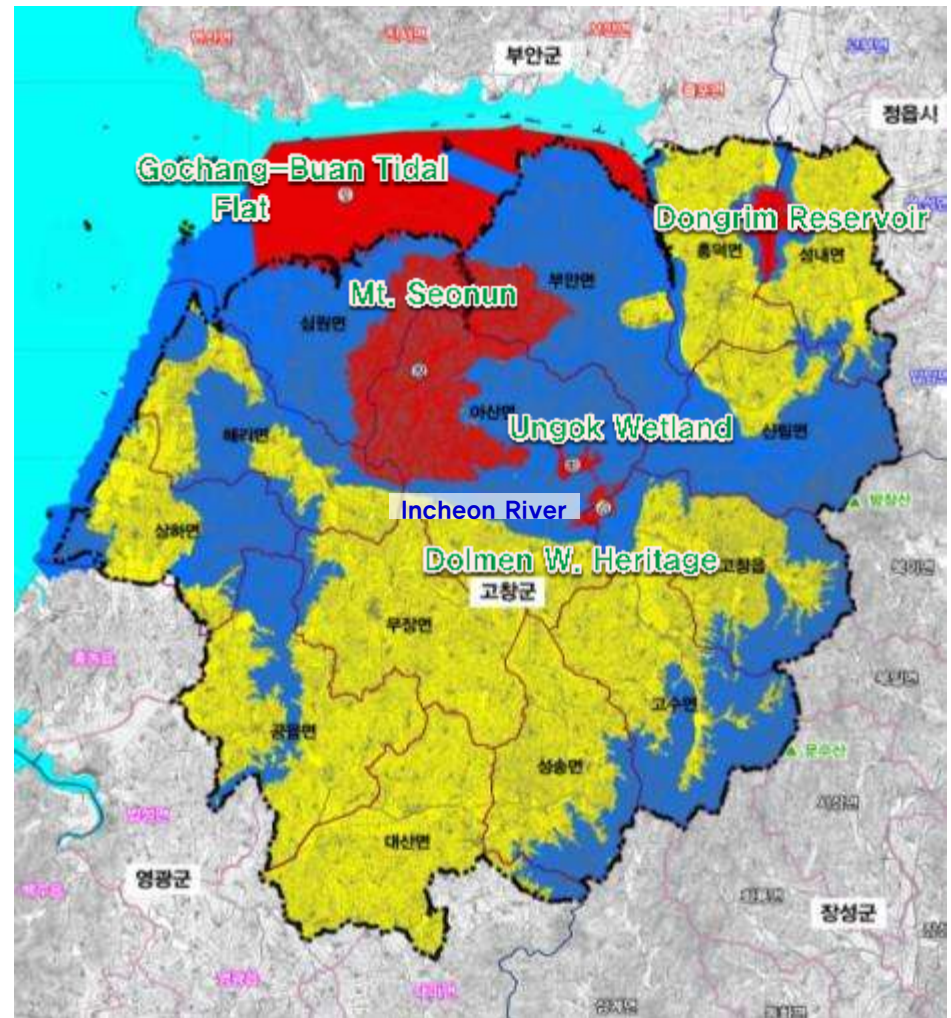
- Tidal Flat Wetland, Mt. Seonun, Ungok Wetland, Dolmen WH site, Donggrim Reservoir

Buffer zone : 265.54km²

- Forests, River, Salt marsh, Sand dunes

Transition area: 314.70km²

- Area outside of core area and buffer zone
- Agricultural and residential areas





Mt. Seonun Provincial Park (Core area)



**Ungok Reservoir (Ramsar Site) (core area):
Restored wetland from former rice paddies**



**Gochang Mudflat (Ramsar site)
(core area): used for seaweed
culture, harvest of clams, and
as a site for experience
tourism; also important for
migrating birds (saved from
reclamation).**





Education Center for Gochang Mudflat Ramsar Site and Clam Harvest Experience Ecotourism

New Organization for Gochang Biosphere Reserve Management



- Management Plan was established for sustainable development (Feb. 2014): 180 Projects were developed
- Management Ordinance was approved (Apr. 2014)
- Management Committee was established (Apr. 2014): 25 members with Mayor of Gochang County as the chair
- New organization was established for management of Gochang BR within Gochang County Government (Jan. 2015): 8 officials (Now 21 officials of three teams covering biosphere reserve, geopark, and dolmen site)
- Gochang BR Management Center Building was constructed (2017): Size of the center: 5,000m² (two storied building) with offices, education facilities, conference rooms, exhibition halls, etc.

Utilization of Gochang BR Logo



- Gochang BR Logo was developed in 2014, and registered as a trade mark.
- Demonstration project: 2014.06 – 2015.08 (23 companies or institutions, 31 items)
- County Ordinance was formulated for the management of logos and brand use
- Currently Gochang BR logo is used for 101 items from 42 companies or institutions

Examples of Gochang Biosphere Reserve Logo Application

- A. Gochang Biosphere Reserve Logo was developed and registered (Feb. 2014)
- B. Logo was applied to demonstration products in 2014: 31 items from 23 companies
such as dairy products, melon, watermelon, and sun-dried salts
(now 101 items from 41 companies)





Official bus of Gochang County with Gochang BR logo

Promotion of Ecotourism



- Yong-Gye Village was selected as one of the model ecotourism sites by the Ministry of Environment of Korea (July 2014)
- Signing of Agreement for promotion of ecotourism: Minister of Environment, 4 model ecotourism sites of Korea, representatives of the Gochang County and Yong-Gye Village

Yong-Gye Village – Model Ecotourism Site

- Population: 84 people (male: 47, female: 37, from 55 families)
- Major income: agriculture (rice, blackberry, mulberry, etc.) 90%, service 7%, etc.
- Resources: Ungok Ramsar Site, Dolmen Site, Incheon River, a Buddhist temple, etc.
- Community cooperation system was established: investment from 20 village people
 - founded an **agricultural association corporation** for sales of agricultural products, bed and breakfast, etc.



Promotion of Ecotourism in Ungok Village using Ramsar Wetland

- Ungok Reservoir became a national wetland protection area and a Ramsar site (2011)
- Became a core area of Gochang BR (2013)
- Ministry of Environment selected Yong-Gye Village as a model ecotourism site (2014)
- was selected as one of the model ecotourism sites by the Ministry of Environment of Korea (July 2014)
- Major projects: branding of excellent ecological resources, development of various ecotour programs, amelioration of infrastructure for visitors, education for capacity building, establishment of a system based on participation of local people
- In addition to Yong-Gye village, 5 other villages in and around the Ungok Wetland will be incorporated to compose a Ecotour Complex (2015 – 2015): ecological trail, construction of ecovillage, small parks, infrastructures, etc.
- Number of visitors to Ungok wetland: 2014 (10,427), 2015 (17,844), 2016 (20,384), 2017. 9 (16,968)

Challenges and Opportunities for Gochang BR

- Since GCBR is composed of one single county, management efficiency and public awareness can be easily improved.
- In some areas, local people satisfaction is quite high.
- GCBR is a very good example of harmonization of sustainable development and biodiversity conservation through ecosystem restoration.
- There is a need for close cooperation between county government and provincial and central government for the management of BR.
- There is an increasing external pressure for renewable energies such as wind turbines and a conflict is expected regarding conservation of biodiversity and landscapes.

5

Challenges and Future Prospects of BRs in Korea

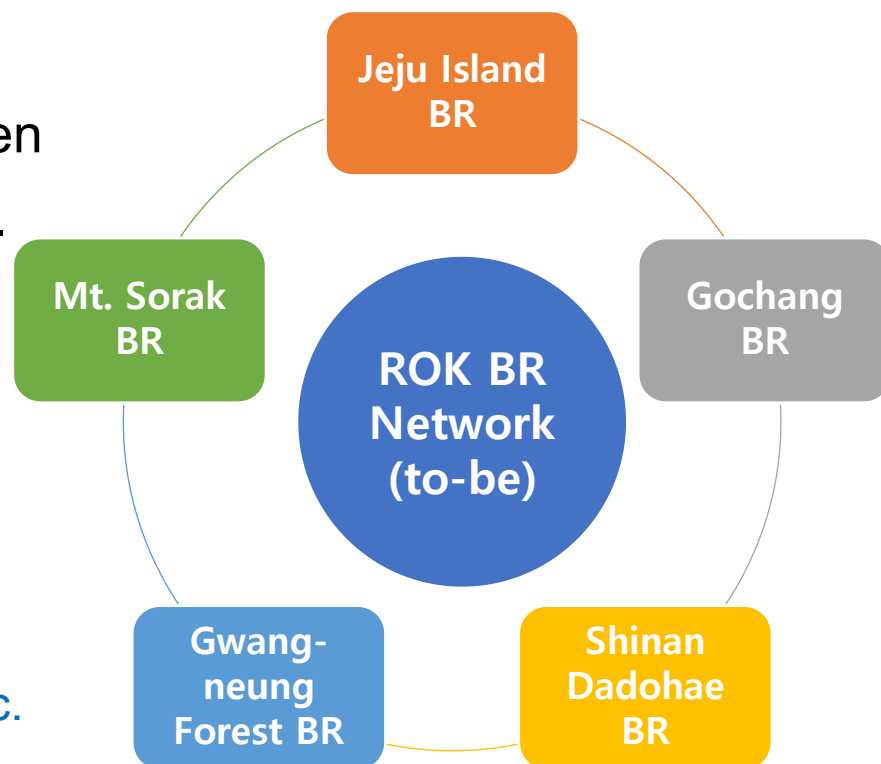


BRs in ROK are ...

- ✓ Not **legally** recognized in the national legislations.
 - c.f. Legal articles on certification of National Geopark was created in the Nature Park Act in 2012.
 - BR was included in the **articles** regarding objects for national **financial support** in the National Natural Environment Act (March 2013).
 - **Local regulations** on each BR are established except Mt. Sorak BR.
- ✓ Supported by the **MAB National Committee**.
 - organized according to the directive of the Ministry of Environment (2012)
 - consists of 25 members (national governments, academic & NGO experts, UNESCO Nat. Com.)
- ✓ not widely **understood** by the public in general.
 - but has improved since mid 2000s.
 - BR name with 'reserve' contributes to aversion/objection to BR; local people are afraid of additional restrictions.

Need for BR networking for capacity strengthening

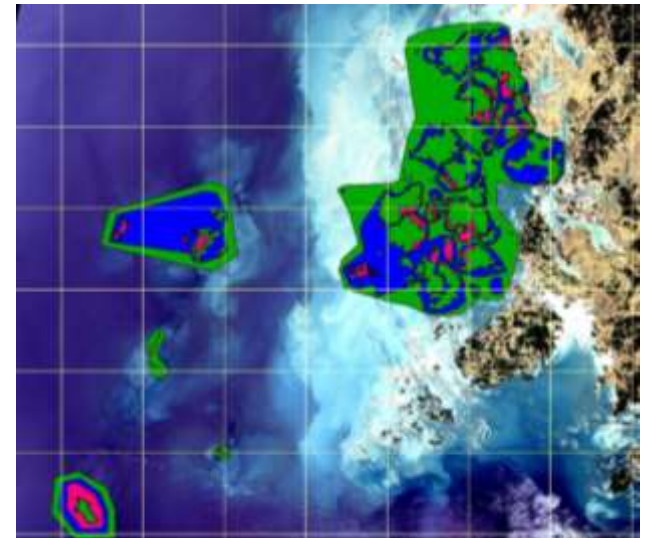
- ✓ BR manager workshops have been annually organized by MAB-ROK.
- ✓ 5 BRs now - their own network creation suggested
 - human networking
 - information gathering
 - joint activity development
 - addressing common challenges, etc.



BR labelling projects of 4 BRs

✓ Positive impacts so far

- Recognized as one of potential mechanism for **'promoting local economy'**
- Contributed to understanding of BR (SD) concept & increasing **local acceptance of BR** e.g. Jeju Island BR extension plan (2018)
- **Local business associations** are in creation, which will contribute to increasing social capital (human networking) .







BR labelling projects of 4 BRs

✓ Limits & challenges

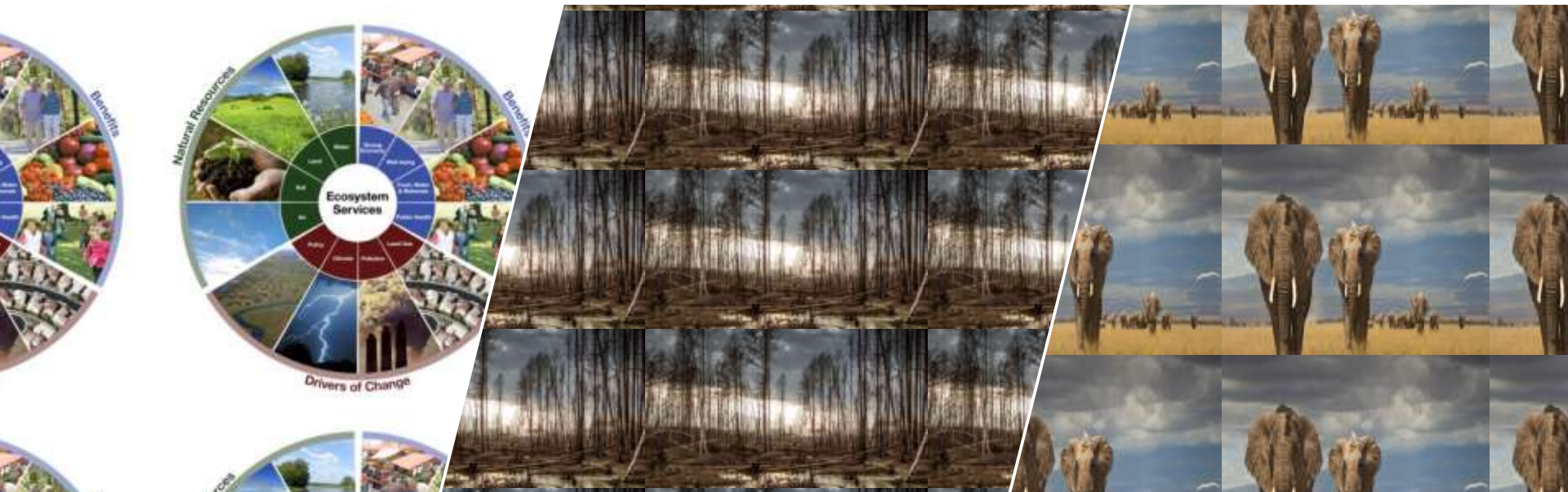
- Need of more broader approach of the **BR brand (marketing)**, not limited to certification system of products/services
- Challenge of **quality control & management**
 - at BR level, how to keep & improve 'trust' to their labels/brand?
e.g. products of many small-scale producers / products of large companies
 - at national level, not to hinder 'overall BR brand value'
(do we need national guidelines or regulations?)
- What difference between same-quality products produced in and adjacent BR / among many quality labels?
 - BR label (brand) should have '**distinction**', '**additional values.**'
e.g. **reinvestment** to the BR conservation (circular system)
- Need for one common logo of Korean BR which can be applied to all BRs

BR labelling in 4 Biosphere Reserves

- Highly interested by BR managers
 - regarded as more 'visible', 'measurable' project
 - easier to attract interest of local people

	Jeju Island	Shinan Dadohae	Gwangneung Forest	Gochang
Logo development	 2012	 2014	 2012	 2014
Pilot implementation	46 items of 18 producers in 2014	Used the BR brand since 2011	Not yet	31 items of 23 producers in 2014-2015

6 Summary



Summary



- Currently there are 5 biosphere reserves in the R. Korea, and more new biospheres are expected to be designated in the near future.
- Korea MAB Strategy and Action Plan was established in 2015, and if specific action plans are established and carried out it will contribute the overall functioning of the biosphere reserves.
- Examples of sustainable development programs are relatively well carried out in Jeju Island BR, Gochang BR and Shinan Dadohae BR. Major forms of sustainable development are ecotourism and application of BR brand for generating income for local people.
- One factor for successful management is integrative governance involving local stakeholders and an administrative unit dedicating the management of BR and related conservation.
- BR labelling is actively used or pursued as a vehicle for sustainable development in all the 5 BRs in ROK.