

# Activities of K-BON with Civil Scientist

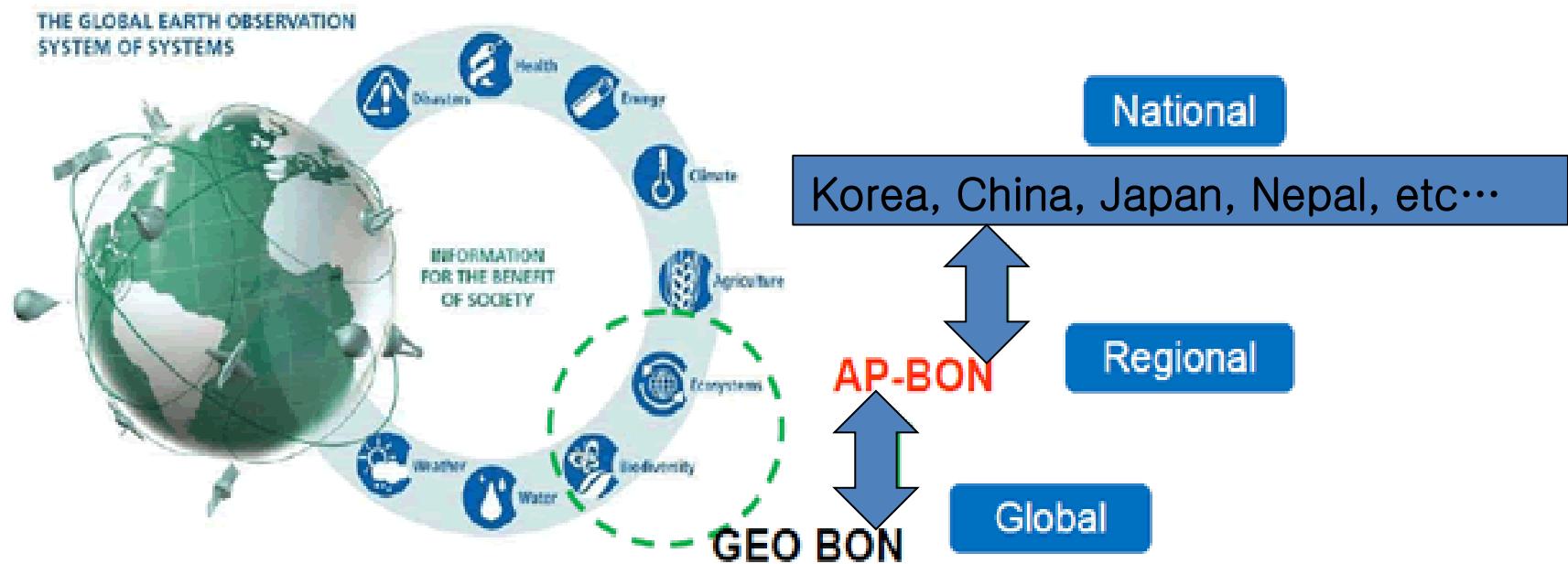
2017. 1. 12

Chan-Ho PARK

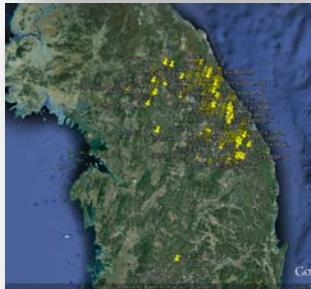
NIBR, KOREA

# K-BON is

- National BON of Asia Pacific Region
- Member of AP-BON
- Collaborate to GTI(Global Taxonomy Initiative) and ESABII



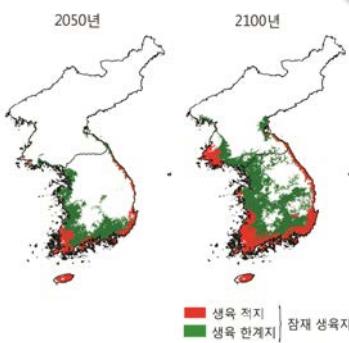
## Monitoring group with Civil Scientists (WG1)



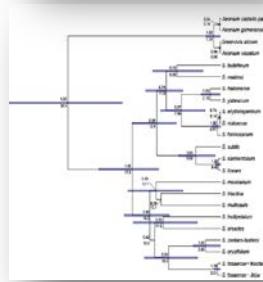
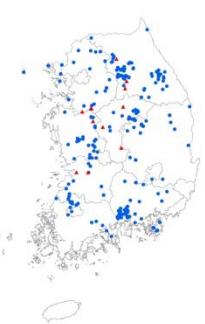
Species  
Distribution  
Modeling  
(WG2)

Biodiversity  
information  
Data base  
(WG4)

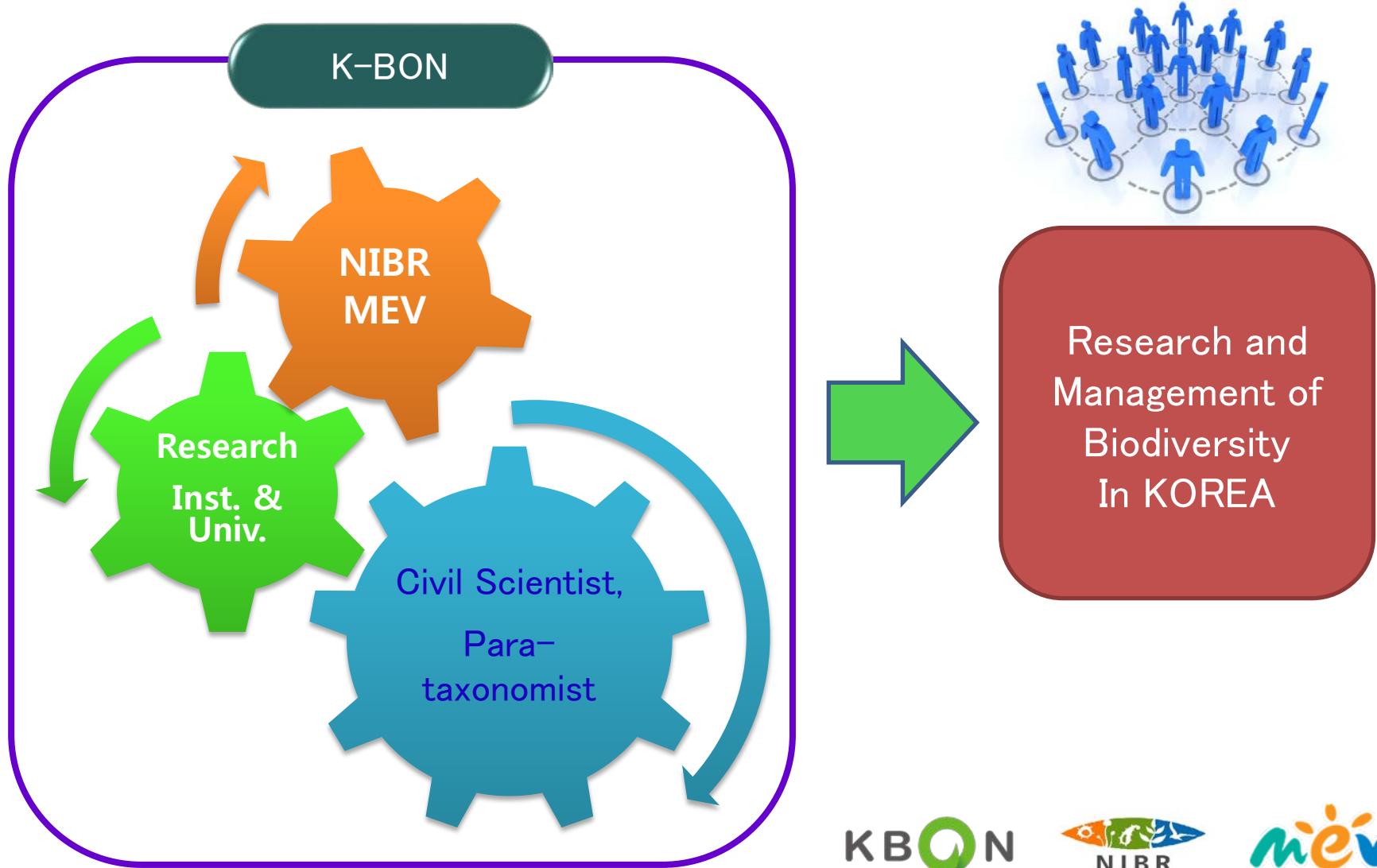
RedList  
Research  
(WG3)



Korea NBSAP, Plan of Invasive Alien  
Species, National Plan of Adaptation of  
Climate Change etc.



# K-BON : Korea Biodiversity Observation Network



# K-BON information System Structure



Upload  
to server



## Import to server

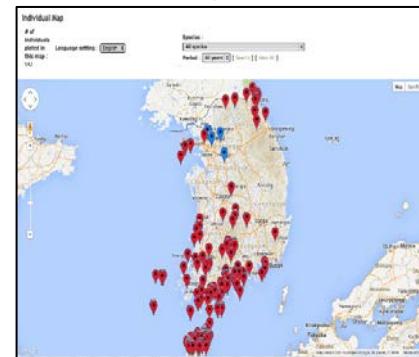


# Observation Data from variable mobile device

# K-BON Server Farm

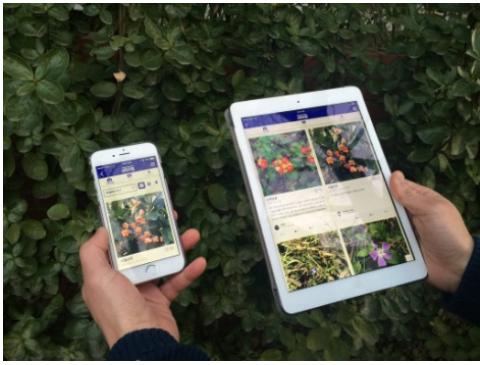


# Observation Data from Diverse Sources

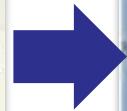


# K-BON Web Interface

# WG1 : Monitoring with mobiles device and SNS



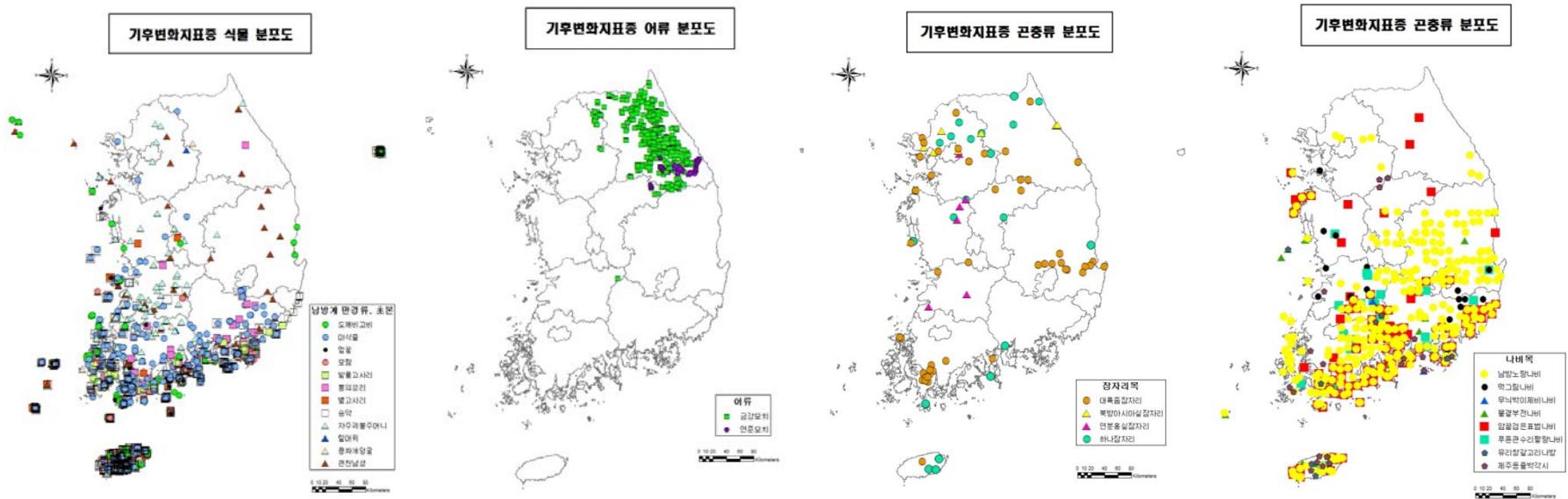
The screenshot shows the 'Namechirng' mobile application interface. At the top, there are tabs for '네이처링' (Nature Ring), '자연관찰' (Natural Observation), '미션' (Mission), and '블로그' (Blog). A blue button '+ 이 미션에 관찰 올리기' (Post observation to mission) is visible. Below this, there are tabs for '개요' (Overview), '관찰기록' (Observation Log), '참여자' (Participants), and '동계' (Winter). A search bar '바이오블리츠 부산 2016 일정도' (Biorbitz Busan 2016 schedule) is present. The main area features a map of the Busan region with numerous blue location markers. To the right of the map is a grid of small images representing different plant species, with labels like '노란개미나비' (Yellow butterfly), '진달래' (Bellflower), and '여뀌' (Milkwort). A red circle highlights a specific cluster of observations in the northern part of the city.



# WG1 & WG4

Specimens data, reference information, various survey data and information via mobile apps for both the observations and analyzes that integrate.

And continue to supplement the species distribution map, and later also want to take advantage of changes in biodiversity observations.



## 2. WG1 & WG4

### Geospatial analysis services linking propulsion by utilizing the K-BON data

Species information

생물종 분포

기후변화적응종 검색

생물종명  
• 분류군  
○ 전체 ○ 휴유류 ○ 어류 ○ 양서류 ○ 파충류 ○ 조류 ○ 무척추동물 ○ 곤충 ○ 관육식물 ○ 선해류  
○ 규조류 ○ 편모조류 ○ 범수족류 ○ 윤조류 ○ 해조류 ○ 금류 ○ 지외류 ○ 원생강물 ○ 세균 ○ 날조류  
• 경영순서  
□ 국영 가나다순 □ 학명 ABC순

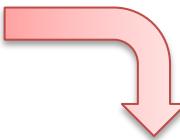
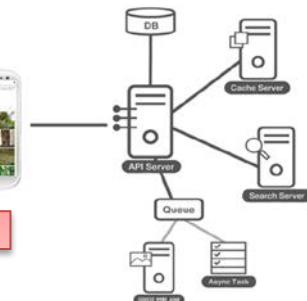
검색

기후변화적응종 전체 목록



검색결과

	• 국명 : 산고리를 • 학명 : <i>Pseudolysimachion rotundum</i> (Nakai) <i>Holub var. subintegrum</i> (Nakai) T. Yamaz.
	• 국명 : 산고리를 • 학명 : <i>Pseudolysimachion rotundum</i> (Nakai) <i>Holub var. subintegrum</i> (Nakai) T. Yamaz.
	• 분류군 : 관육식물 • 표본 1건
<a href="#">분포지도</a> <a href="#">자료정보</a>	<a href="#">분포지도</a> <a href="#">자료정보</a>



생물종 분포

연구사업 소개 기후변화적응종이란? 기후변화적응종 목록 기후변화적응종 분포

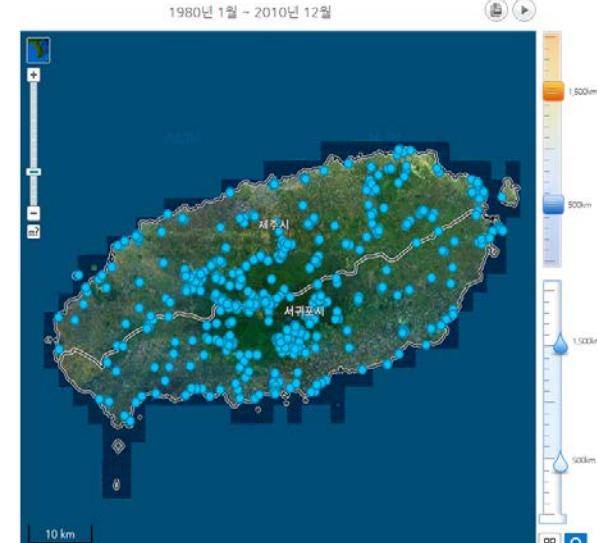
0목 0속 0종 총 70종 총 700점

생물종▼

분류군 선택

검색

번호	종군명(학명)	데이터
1	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
2	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
3	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
4	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
5	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
6	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
7	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
8	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
9	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.
10	주걱개망초	<i>Erigeron strigosus</i> Muhl. ex Willd.

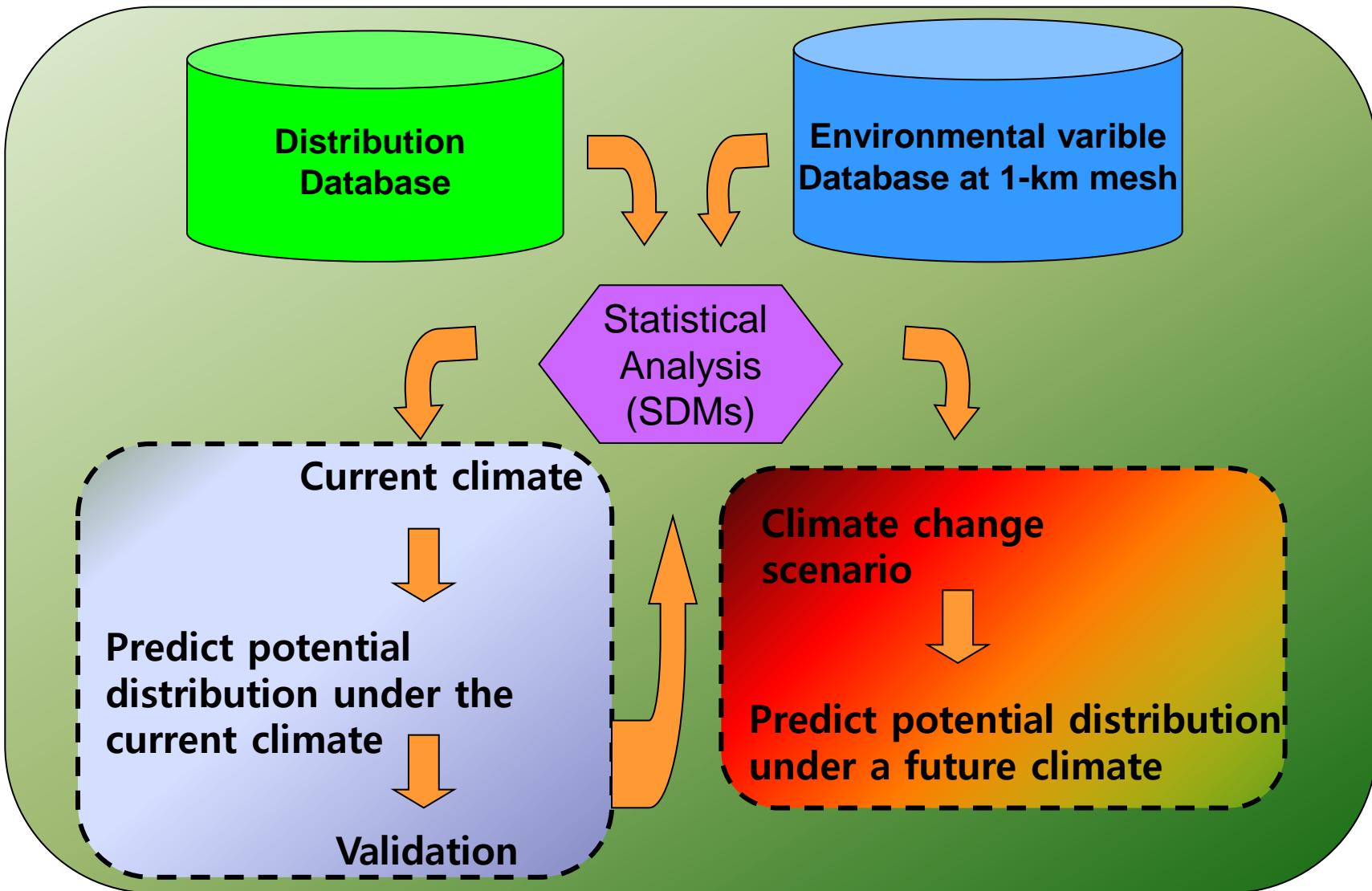


Distribution information

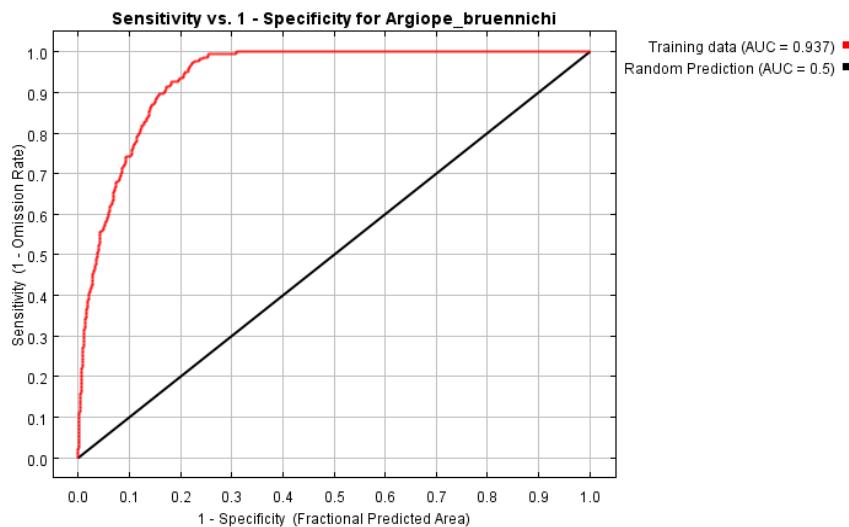
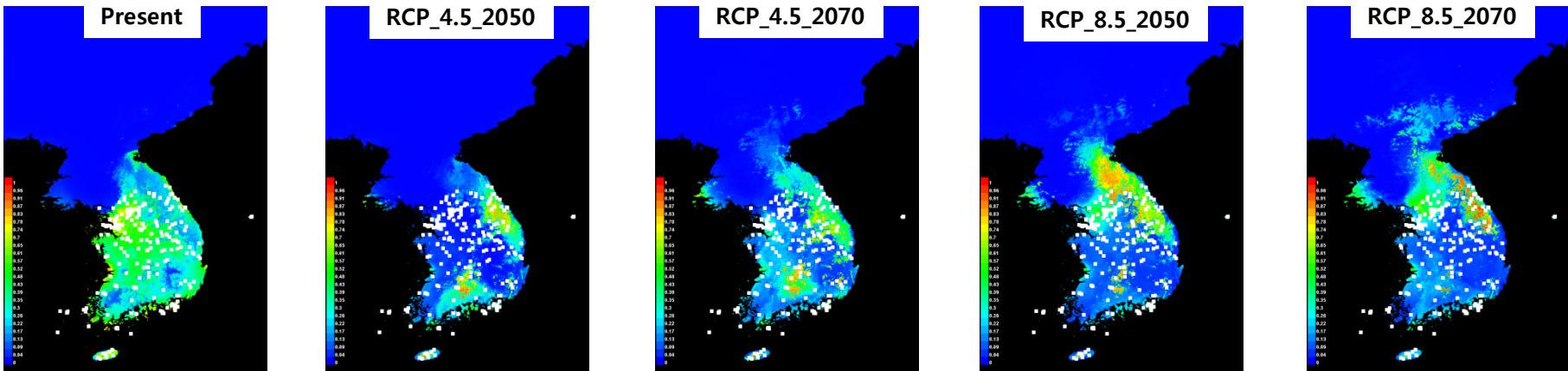
총 > 생물종 분포 > 기후변화 적응 생물종

1980년 1월 ~ 2010년 12월

# WG2 : Species Distribution Modeling



## ② Research

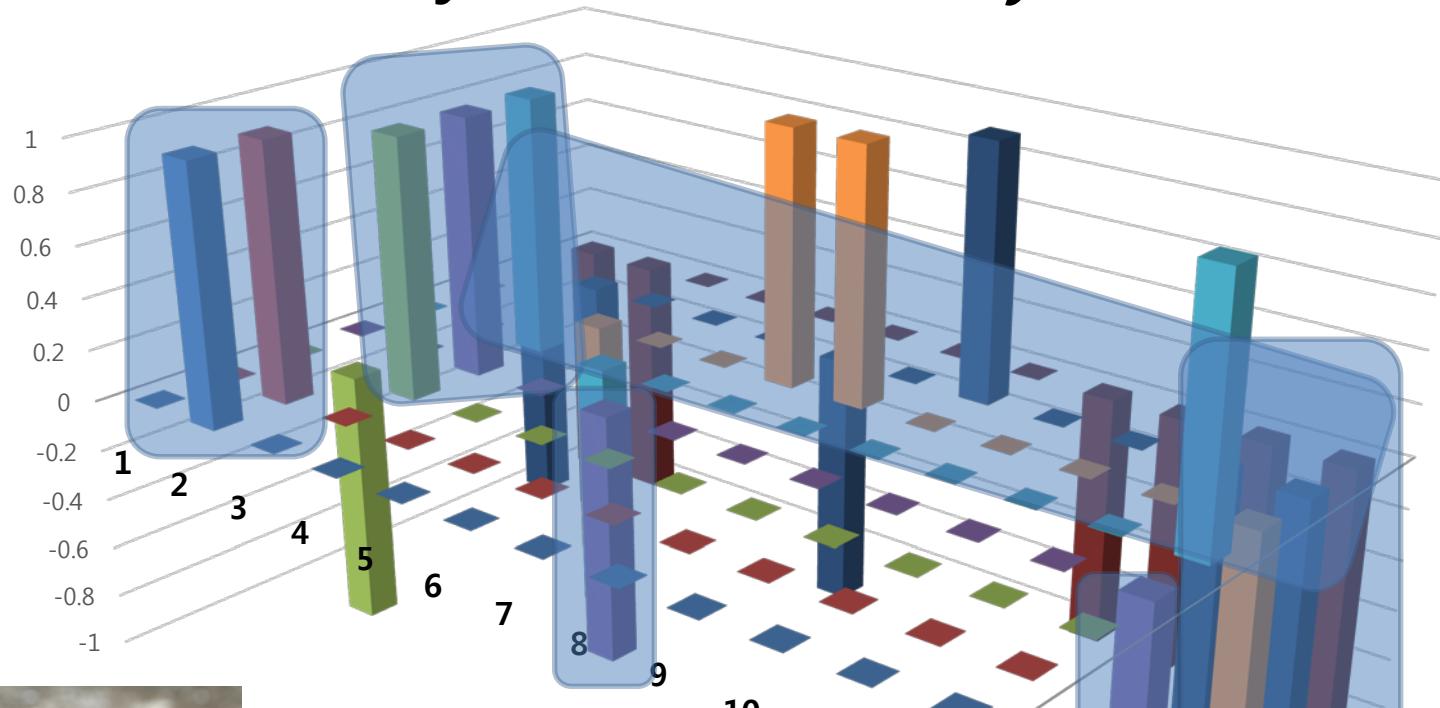


Banana spider  
*Argiope bruennichi* Scopoli 1772

	Pre	RCP_4.5_2050	RCP_4.5_2070
Area (km <sup>2</sup> )	124,071	40,892	63,726
		RCP_8.5_2050	RCP_8.5_2070
		63,838	61,075

## ② Research

### Correlation Summary Matrix of *Rana dybowskii* (1)



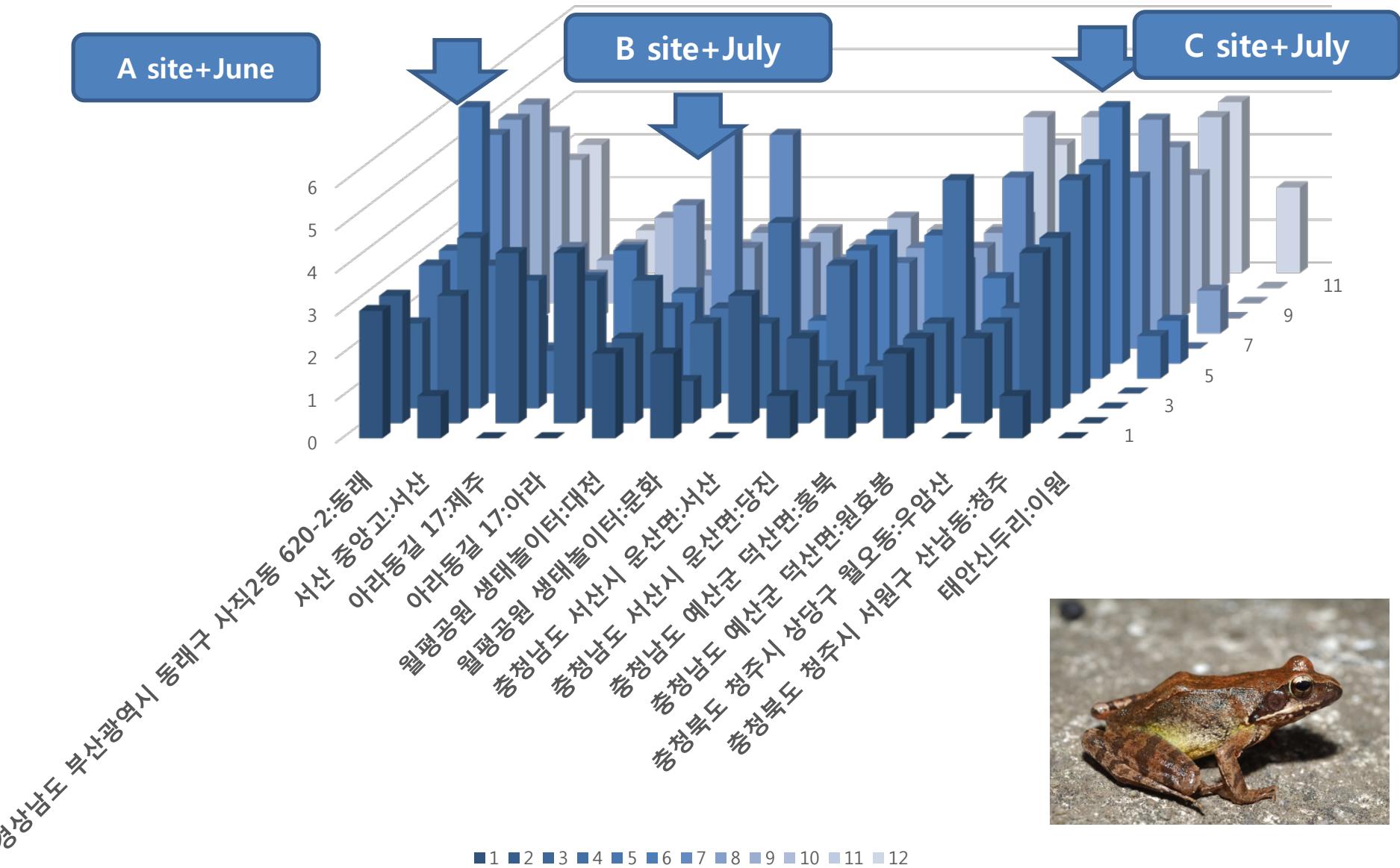
은 2월달에만 Positive correlation<sup>10</sup>을 보임  
우일, 비강우일)이 Positive correlation을 보임  
tive correlation 을 보임  
관련 correlation은 월별 데이터와 연관성이 적어 보임

- 월별 평균 풍
- 월별 강우일

date of the various weather elements, it is possible to use as a prediction data for the following year the first egg

# Correlation Summary Matrix of *Rana dybowskii* (2)

- Frequently seen in local weather data and a positive correlation



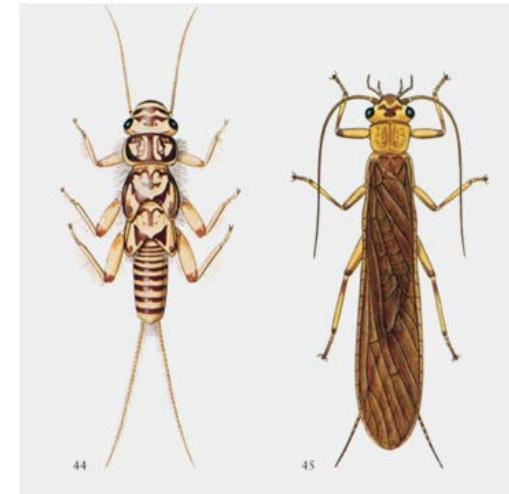


- Invasive species of Onagraceae spp.
- *Ludwigia peploides* subsp. *stipulacea* (Ohwi)  
P. H. Raven ?
- *Ludwigia peploides* (Kunth) P. H. Raven ?



Need more taxonomical and distribution data

# New Target : Insect of Freshwater but we need more taxonomist!



### ③Outreach

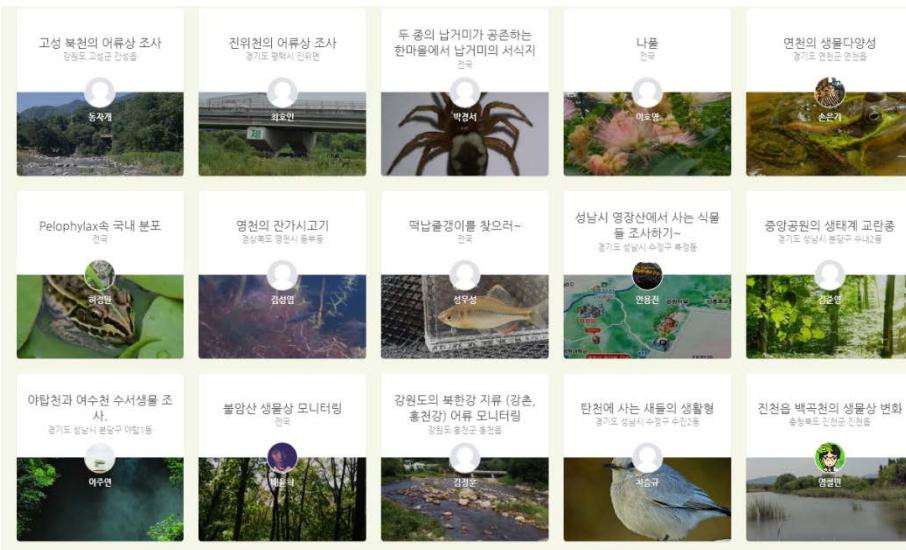
## Capacity Building with civil scientists

- Organize to BioBlitz
- Monitoring with field education



### ③Outreach

## Start of K-BON Junior : The training of future scientists



## ④ Networking

### THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS

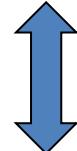


### Proposed Activities for Developing Global Biodiversity Monitoring System

Targeting East Asia and Pacific Region

- Identification of existing researches on biodiversity
  - Distribution of Monitoring sites
  - Development of standardized data collection
  - Data integration, storage and analysis
  - Capacity building for data collection and data analysis
  - Provision and dissemination of the information
- Collaboration**
- |  |   |
|--|---|
| ILTER<br>NaGISA (CoML)<br>Other programmes | - Data collection and its standardization<br>- Data integration and analysis<br>- Capacity building |
|--|---|
- Contribution**
- Decision Making in Biodiversity Conservation**

GEO BON ↔ AP BON

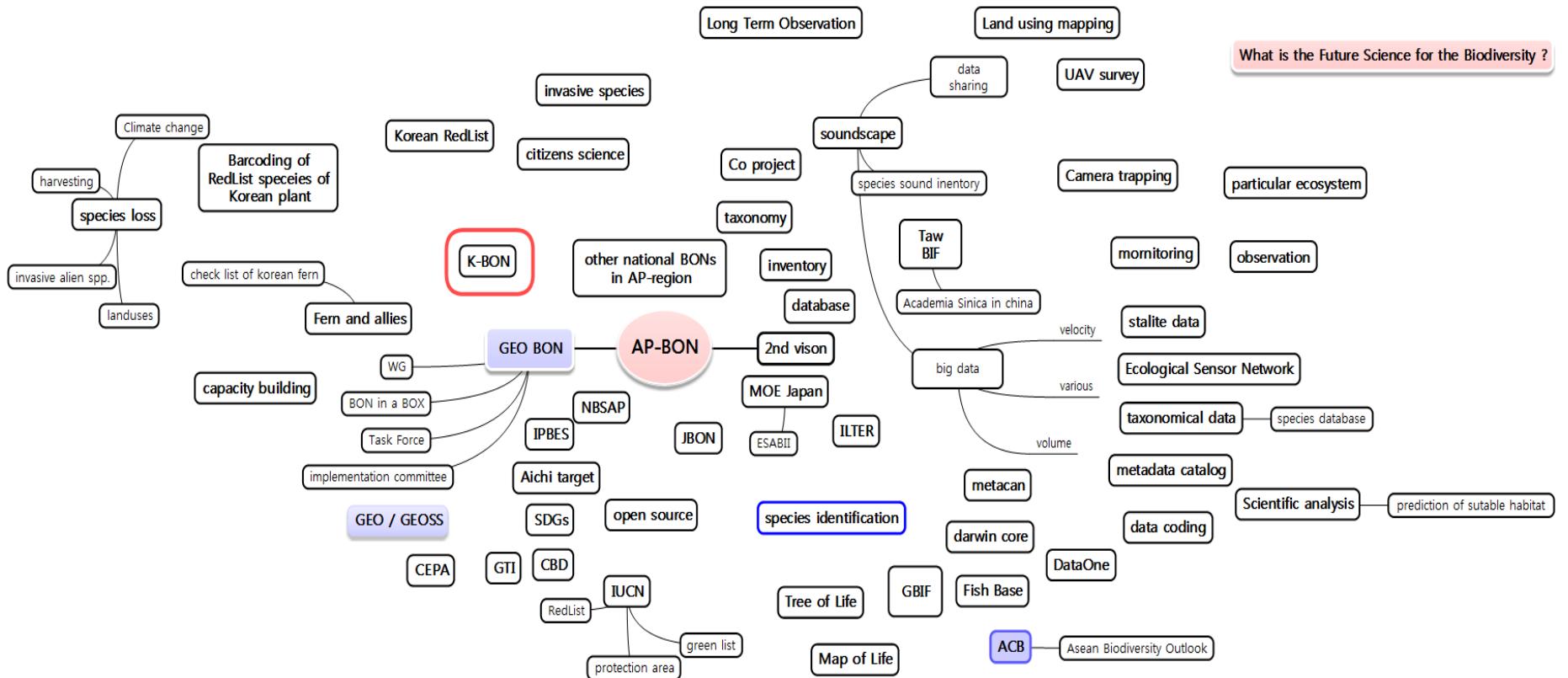


National BON Network



# Strengthening cooperation network of national BON is required.

## This is directly related to the development of the AP-BON.





Korea Biodiversity Observation Network

Thank You