Example

Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do (within 3-5 yrs)	SDGs Contribution
Mapping of diversity of tree species	↗ (red, urgent)	↗ (red, urgent)	• Encourage fieldworks in Cambodia, ...	15 LIFE ON LAND; 13 CLIMATE ACTION; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES
Collection of phenological information of tree species	→ (yellow, general)	↗ (red, urgent)	• Encourage to collect phenological information in each countries	15 LIFE ON LAND; 13 CLIMATE ACTION

↗ increased   → no change   ↘ decreased
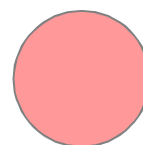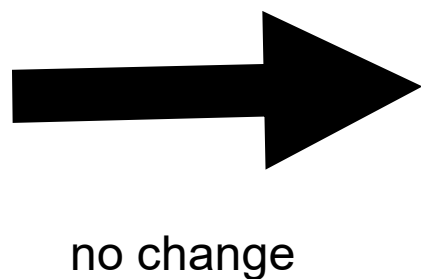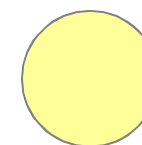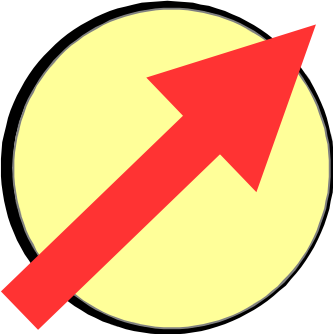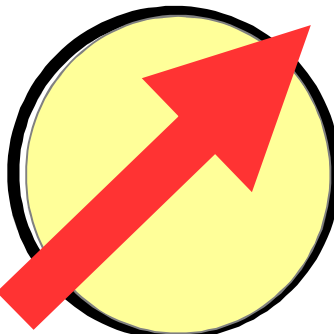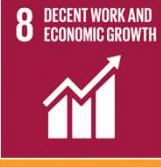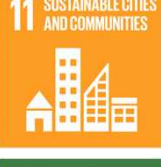
Urgent question   General question

Recommend

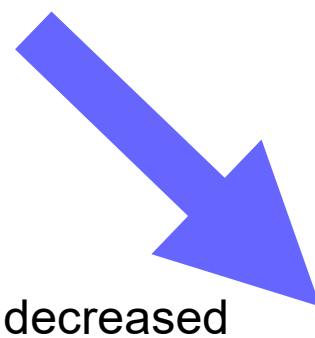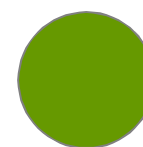| Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
1. Biodiversity research and monitoring				WG :
1. Monitoring states and changes of biodiversity	General question	General question	• At least 5 yrs monitoring of biodiversity, with direct & indirect factors • Monitoring social change; local community (related to MAB site) • Monitoring change after restoration (introduction of new species) • Mapping of afforestation and plantation • Promote to stop deforestation (including to PAs) • Understand to the situation of deforestation and its process in each PA countries • Protection activities in valuable areas including Indo-Pacific having endemic species • Forest change montaging in logging area monitoring and the effect to/from local community • Transdisciplinary research –local community • High value forest mapping	1 NO POVERTY 3 GOOD HEALTH AND WELL-BEING 8 DECENT WORK AND ECONOMIC GROWTH 11 SUSTAINABLE CITIES AND COMMUNITIES 13 CLIMATE ACTION 15 LIFE ON LAND
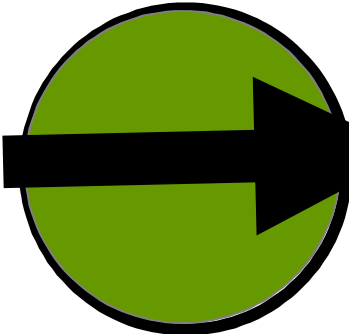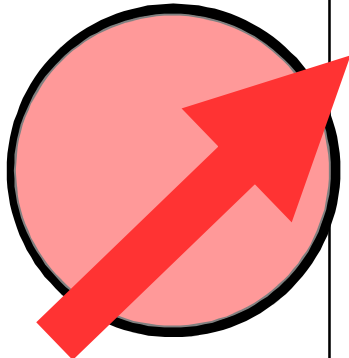
Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
2.Filling gaps in data availability	Urgent question	Urgent question	- Promotion of Data digitalization - Plots establishment - Plant Survey over SE Asia - Data accumulation 100 times (GBIF) (to do) - What the data gap is; assessment of gaps (geographical, taxonomic, ecosystem, knowledge, drivers: skill, education) e.g. Developing countries – still big gap - Identifying driver, pressure in each region - Data gap assessment: what kind, How to fill the gap; possible solutions from APBON (possible solution) - Capacity building taxonomists - Science-policy gap; hierarchy recognition; communication with decision makers (GEO, CBD, national, WCC) - Using social science; decision making process (adaptive management/learning, adaptive co-management/governance: Future earth); for post-2020,	3 GOOD HEALTH AND WELL-BEING 4 QUALITY EDUCATION 10 REDUCED INEQUALITIES 13 CLIMATE ACTION 15 LIFE ON LAND

Filling gaps

1. Identifying Data gaps:

    -Such as developing countries, Pacific islands

2. Possible solution to fill the gaps: National BONs, input to NBSAP

3. To do list from APBON; report for CBD COP15

Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	WG : SDGs
3.Increasing access to data (data sharing)	Recommend no enough change	Urgent question	(academic) ● Data accumulation 100 times (GBIF), mostly Europe, only Thailand in SE asia, not enough accumulation ● MyBis (access limitation) ● Data paper (social) • Photo Book publication • Digital atlas of biodiversity in Thailand • Citizen science: Digital photos of biodiversity in Monitoring1000 (Japan, Korea) – • Mobilization of existing data; capacity building, Digitizing data, geographic gaps; • SNS, iNaturalist, Naturing (Korea), Bird Trucker (China) • Institutional regulation on data access, sharing Using the framework: Discoverability, accessibility, usability, preservation, curation 1. gaps, 2. possible solutions, 3. to do list	3 GOOD HEALTH AND WELL-BEING 4 QUALITY EDUCATION 13 CLIMATE ACTION 10 REDUCED INEQUALITIES 15 LIFE ON LAND

Parameter	Evaluation 2009-2019	Action plan 2019-2030	WG : To Do	SDGs Contribution
4.Improving knowledge on cutting-edge technologies	Recommend	Urgent question	Development of cutting-edge technologies • Genome science • Spatial analysis; remote sensing • Meta analysis; statistics • Experimental survey design • Sound scape monitoring • Monitoring using wireless, IoT • AI • Deep learning • Block chain (design) • Growing demand for biodiv monitoring from Earth system science (carbon; possible collaboration in next AOGEO) • Standardizing the methodology (i.e., camera trap setting, design) with DL • Twitter/SNS analysis, text mining, data mining • Automatic language translation using google etc (use local name and scientific name) (how to promote) • Establishment TGs • Publication of methodology • Capacity building to utilize the data efficiently • Interdisciplinary Collaboration (report for CBD) • Cutting edge method should be based on the conventional method, human resources • In practical, skills for identification in the field is still important	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 13 CLIMATE ACTION 15 LIFE ON LAND

2. Networking of networks

Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
1) Networking with observation sites and networks	Urgent question	Urgent question	• Partnership with EAP-ILTER • Establishment of plant diversity assessment network in SE Asia • Phenological Eyes Network • Monitoring 1000 (Japan) • National BONs (JBON, KBON, Sino-BON) • GEO BON (headquarter) ; regional BON (including APBON), thematic BON; 7 WGs, Task forces • Flux-Network (AsiaFlux, OzFlux) • GEO (GEO BON) • Future Earth • ILTER	13 CLIMATE ACTION 15 LIFE ON LAND 17 PARTNERSHIPS FOR THE GOALS
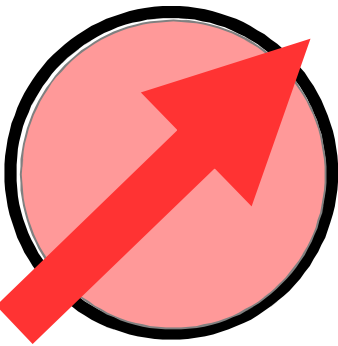
2. Networking of networks

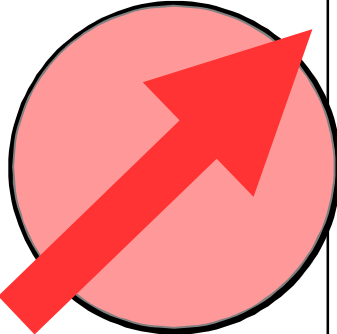| Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
2) Networking with global platform, policy-relevant communities	Urgent question	Urgent question	• GEO (GEO BON) • IPBES, IPCC • CBD(Aichi Target), UNFCCC (Paris Agreement), UNDRR (Sendai Framework) • IUCN (WCC) • Future Earth • UN SDGs • UNESCO (MAB, World Heritage) (priority target) Observation community • GEO (GEO BON) Observation-policy dialogue • IUCN (WCC) Assessment • IPBES, IPCC Policy • CBD(Aichi Target) • UN SDGs • UNESCO (MAB, World Heritage) Strategy to access to each type of communities	13 CLIMATE ACTION 15 LIFE ON LAND 17 PARTNERSHIPS FOR THE GOALS

3. Outreach activities, Capacity building, Actions for biodiversity of networks

WG :

Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
1) Outreach activities & social communication	Recommend	Urgent question	• SNS • Publication of photo books, broucher • Websites • Data archives (Mybis, M1000, Phenological eyes networks) • Open lecture • EAFES (East Asian Federation Ecological Societies) • ATBC Asian Chapter • CEPA (communication education and public awareness) • User Engagement and Communication (exhibition, side events in COP, GEO)	4 QUALITY EDUCATION 10 REDUCED INEQUALITIES 15 LIFE ON LAND 13 CLIMATE ACTION

3. Outreach activities, Capacity building, Actions for biodiversity of networks

WG   :

Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
2) Capacity building	Urgent question	Urgent question	• Training courses for skills, methodology, and related topics in Sino BON • ATBC Asian chapter, AP region (India) Mobilized data-translated to multiple languages • ESABII • Training workshops • SATPRES • Development of online modules using such as Youtube • Capacity building in APBON WS – Core skills: collecting specimen, GIS, survey skill • ILTER WS – information management (in coming conference, ILTER EAP)	4 QUALITY EDUCATION 10 REDUCED INEQUALITIES 13 CLIMATE ACTION 15 LIFE ON LAND

5. How can we contribute to AOGEO pilot studies
1) Mekong 2) Pacific islands 3) Himalaya

1) Mekong;
- Yongyut (ITTO project) enhancing teak forstry in 5 countries in Mekong (Cambodia, Thai, Myanmar, Lao, Vietnam) , Genetic variation of teaks –{GIS}
- Shin Nagai with Eko (ENSO)
- Yahara, Forest plots in Mekong
1) Pacific islands;
- Dedy Cendrawasih University, West Papua (Indonesia) to Pacific region, biodiversity of islands of New Guinea {plantation development although it has many endemic species – (capacity building, data sharing)}
1) Himalaya; Mangal
- Onuma (Mitsui env fund): disease in Rhino population (Chitowan NP), genetic diversity of Bear population
International Centre for Integrated Mountain Development (ICIMOD) (Himalaya, Hindu kush) – community activities
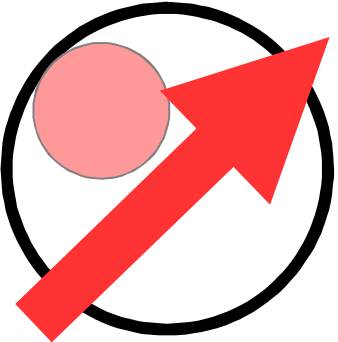
6. How can we raise funds for APBON activities?

-Japanese fund (Ministry of Environment (policy-oriented studies), MEXT JSPS (fundamental studies))
-MEXT fund to AOGEO

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS			

Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	
3.Increasing access to data (data sharing)				
4.Improving knowledge on cutting-edge technologies			(academic) Development of cutting-edge technologies • Genome science • Spatial analysis; remote sensing • Meta analysis; statistics • Experimental survey design • Sound scape monitoring • Monitoring using wireless, IoT • AI • Deep learning • Block chain (design) • Growing demand for biodiv monitoring from Earth system science (carbon; possible collaboration in next AOGEO)	

Filling gaps

Outreach to policy makers

Gaps in science, Science-society, science policy

APBON's role in filling gaps between science-polity dialogue

IPBES, CBD, GEO, WCC
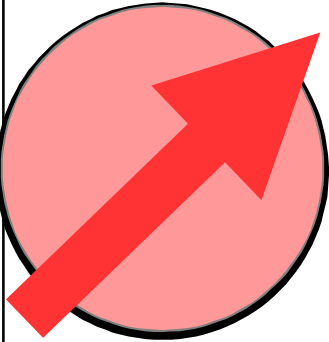
Gaps in biodiversity observation

Thematic

Geographical

capacity

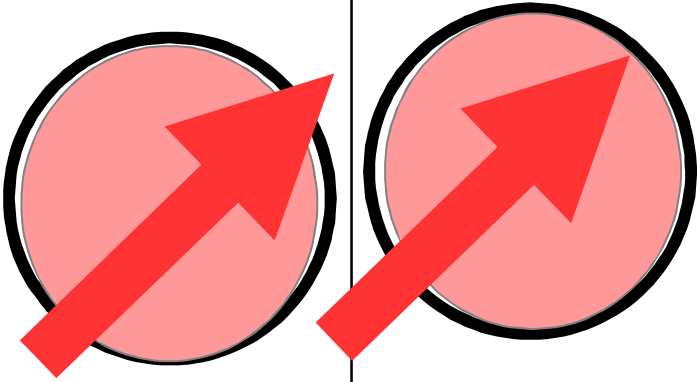| Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
2.Filling gaps in data availability			- Promotion of Data digitalization - Plots establishment - Plant Survey over SE Asia - Data accumulation 100 times (GBIF) (to do) - What the data gap is; assessment of gaps (geographical, taxonomic, ecosystem, knowledge, drivers: skill, education) - Data gap assessment: what kind, How to fill the gap; possible solutions from APBON () - Review AP IPBESCapacity building taxonomists - Developing countries – still big gap - Science-policy gap; hierarchy recognition; communication with decision makers (GEO, CBD, national, WCC) - Identifying driver, pressure in each region - Remote sensing skill - Key biodiversity areas - Social science; decision making process (adaptive management/learning, adaptive co-management/governance: Future earth); for post-2020	3 GOOD HEALTH AND WELL-BEING 4 QUALITY EDUCATION 10 REDUCED INEQUALITIES 13 CLIMATE ACTION 15 LIFE ON LAND

Parameter	Evaluation 2009-2019	Action plan 2019-2030	To Do	SDGs Contribution
2.Filling gaps in data availability			• (Academic) • Gaps in Pacific region- Indonesian channel to the islands • Data digitalization • Plots establishment • Plant Survey over SE Asia • Data accumulation 100 times (GBIF) • Less taxonomists • Remote sensing skill • Social science; decision making process (adaptive management/learning, adaptive co-management/governance: Future earth); for post-2020, • (Social/Political) • Developing countries – still big gap • Science-policy gap; hierarchy recognition; communication with decision makers (GEO, CBD, national, WCC) • Identifying driver, pressure, status, impact, response (DPSIR) in each region To do • Review AP IPBES assessment • What the data gap is; assessment of gaps (geographical, taxonomic, ecosystem, knowledge, drivers: skill, education) • Data gaps: what kind, How to fill the gap; possible solutions from APBON • Key biodiversity areas	3 GOOD HEALTH AND WELL-BEING 4 QUALITY EDUCATION 10 REDUCED INEQUALITIES 13 CLIMATE ACTION 15 LIFE ON LAND