

Summary Report

Name: 12th AP-BON Workshop

Date: 22 January, 2021

Venue: On-line (Webex meeting room)

Welcome and opening remarks

Opening Remarks : Hiroyuki Muraoka (Co-Chair, Gifu University, Japan)

Dr. Hiroyuki Muraoka, one of the three co-chairs of APBON delivered a brief orientation on APBON's history and thanked the organizers on behalf of the co-chairs of APBON. He reminded the meeting of the beginnings of a Global Biodiversity Observation network in 2008 and recalled the history of APBON. He provided a short introduction to the discussions of the workshop, highlighting keynote and plenary presentations, and the introduction to the new work plan. And he mentioned that in the last 10 years since the AP-BON established, we had wonderful co-chairs, Dr. Yahara, Dr. Sheila, and Prof. Kim. He appreciated their efforts very much to our biodiversity observation network. And he explained that Ms. Runi Anak Sylvester Pungga from Malaysia, Prof. Yongyut Trisurat from Thailand, and Prof. Hiroyuki Muraoka were appointed as new co-chairs in the middle of November. He thanked the Ministry of the Environment, Japan for their support of this workshop.

Opening Remarks : Runi Anak Sylvester Pungga (Co-Chair, Forest Department Sarawak, Malaysia)

Ms. Runi Anak Sylvester Pungga, who is one of the co-chairs of APBON, welcomed all of the participants and said that it is a very important opportunity to meet all of the participants here and she expressed the delights to have this 12th APBON workshop to listen to keynote speeches and presentations. She hoped it would be a great time to share the information and study each other one day long.

Opening Remarks : Yongyut Trisurat (Co-Chair, Kasetsart University, Thailand)

Prof. Yongyut Trisurat, one of the co-chairs of APBON, thanked the former co-chairs of APBON and welcomed all of the participants here. And he also thanked all of the invited speakers to give speeches. He expressed his sincere appreciation to the APBON community to dominate me the co-chair of APBON. So based on the excellent

achievement, as the new co-chair, they are ready to move to the next step, and it's an honor to work with the international communities, which will be discussed in the first session later.

Opening Remarks : Hideaki Matsumoto (Ministry of the Environment, Japan)

As a Secretary-General of APBON, Mr. Hideaki Matsumoto, Director of the Biodiversity Center of Japan, Ministry of the Environment-Japan welcomed participants to the 12th Asia-Pacific Biodiversity Observation Network Workshop. Unfortunately, due to the worldwide pandemic of COVID-19, this is the first time to hold a workshop online.

He expressed his warmest appreciation to 3 newly appointed APBON co-chairs and the speakers. He mentioned that APBON was established in 2009 as a regional network to gather and share information on biodiversity and ecosystem services in the Asia-Pacific region, which leads to the 12th workshop today. He also mentioned that in this workshop, there's a chance to share the current status of biodiversity observations in the Asia Pacific region, and discuss how we can enhance engagement, networking, and actions by GEO BON, CBD, KBA, and others international bodies. In the end, he concluded his address by thanking all of the participants again and expressed his sincere expectation for fruitful discussions.

Reviewing APBON's Strategic plan to 2030 and objectives of this workshop (Hiroyuki Muraoka, Co-Chair, Gifu University, Japan)

Session I Development of BON and its contributions to society

Presentation: 1. CBD post 2020 Global Biodiversity Framework

(Mr. Basile van Havre, Canadian Wildlife Service)

Q&A parts:

Q: I was wondering if CBD is discussing setting complete goals and providing a monitoring framework for the index for the post-2020 target?

A: This area of genetic diversity is probably the one that requires more work in the goal. And we received the missions from the genetic diversity network when we had a few meetings with them. If you look at the monitoring framework posted on the CBD website, look at what has been submitted there. If you feel this is not clear enough, please make comments, and I'll be related to back to us. I know it is not done properly so far, but I'll do all the help that I can.

Q: We have challenged integration of different conventions, for example, climate conventions we have the one plan somewhere earlier this week, now many conservation scientists are alert that many of comic conventions have huge drives to plant trees, Pakistan billion trees, tsunami, half of those trees are being spared. In the world life tree framework, CITES is still missing the majority species, how are we going to better integrate synergize these different conventions to complement each other, and to complement the mission of CBD, and fulfill the goals of the post-2020 framework?

(Because when last time we do it, we were going to see this critical situation where biodiversity conservation was being hampered by certain climate targets. And for most I've seen that have not yet been enough synergy to climate nutrient benefit we need.)

A: I think your question is on the very good point. There's a workshop related to the planet summit taking place in 12hours. We need to put it into the structure. So the first step is, make sure that climate projects do not harm biodiversity. That's what you deal with the eucalyptus issue. However, that's not enough. What we want are a natural positive project. So I'll take a Canadian example, we do have 2,000,000 tree targets, and what we hope to do is to be able to plant those 2,000,000 trees in places where there is a need for installation. In the boreal forest, there has been a seismic exploration in the past. So we want to replant those in native species that do tree benefits so you get the climate benefits you get your protected area. So and that's OK, you can triple dip in the

benefits with one project so that's the first point.

The second part is the coordination between institutions and I think the links to CITES which is likely easier than the one on climate because they fall under the same group of the convention. And that's what we're doing with ensuring that there're performance indicators. For example, the one on the sustainable train should be directly linked to the CITES one, so CITES is a very effective machine that when you look at the species level from one decision one species, it's a very effective implement place. What is less clear to me is how to totalize their values actions is making a difference and I think that's what you're getting into as well. So we will be working in trying to put in place those linkages between the species. So the above could be part of the answer, but probably not enough to satisfy you.

Q: I have a question about Other Effective Conservation Measures(OECM) because next CBD targets are trying to increase the area with the protected area so many people are focusing on other effective management areas, however, I'm not sure what can be in the marine system so if there's any discussion in CBD about OECM the marine area. It is very important to us. Thank you.

A: It's always difficult to talk about the protection and conservation targets in isolation of target one which is run hunting in total landscape use. (I'll start from a terrestrial example and then move to the Marine right after.) For example, when you look at the total management of landscape, you will choose or you will identify the area that is devoted to production and those are cities where people are living and then we all know that we need some area, and then on the other hand of the spectrum, those there would be some areas that are dedicated to the protection and in between, there will be several different areas including OECM where the primary purpose may not be biodiversity but they do lead to the biodiversity outcome. Moving on to the marine realm, we've seen that the map of the United Kingdom where there were all the various types of the marine protected area and they usually have some level of restriction on some level of activities. It is not a no-take zone, some traditional fisheries may be taking place. So all those tools need to be looked at by the government and they need to have a kind of novel approach, not neglecting any of those. So the tree protection area is important, and the restricted access area is important, the area where there is economic activity yesterday's regulation is equally important. So you need the portfolio and you need to be able to use all those tools the result is having good management for the long term.

Presentation: 2. GEO BON's next plans

(Prof. Andrew Gonzalez, Co-chair of GEO BON)

Q&A parts:

Q: It's quite exciting to see the ongoing in future design and GEO BON to be inclusive of the global community and I have a question about how can we (I mean the community members in APBON) have a variety of people with interests institutions or and individual scientists and how can we (APBON) or the individual member of the APBON be joined to the GEO BON to contribute to establishing this global biodiversity observation network, something like this data itself and knowledge itself or how can we involve in the working groups to work more intensively with the GEO BON community?

A: That's a fantastic question and a crucial word. There are many levels in which I think APBON can help and share the learning that you've acquired over the last 12 years. At the highest level, it's how to create cooperation and collaboration among countries. So what is the culture that you establish to allow that to happen, how can that learning be brought into this working group that we want to establish on creating the globally integrated system? I think we need strong representation from APBON about what it takes to do that effectively. Funding is always limiting but what is the most strategic use of limited funds to create and maintain that network. we have also an opportunity to integrate data sources, so I understand that you're collecting information for different taxonomy in different biomes. I would love to learn how you are integrating that information to provide a picture of change, what kind of tools you are using to make inferences about change, and if that information available to compliment the EBV Data Portal. So there is a data portal that's been established that an idea in Leipzig. It is easy to set up a flow of data to build this data set. So I would say again that there is a data task force to have representation from APBON of our data task force.

And the third point I think is on this in these knowledge hubs. These knowledge hubs which are involving stakeholders end-users and scientists in every single working approach. I would love to know if that is something you're already doing have you already created a knowledge hub like that. I imagine you have. You would be willing to create a knowledge hub for the APBON that would be embedded within the GEO BON network. So these 3 levels which I think there's an opportunity to learn reciprocally from your experience and what we can contribute to help you do that.

Q: Thank you very much and congratulations on your new chairship for the GEO BON. When considering the first development of GEO BON, I think that one of the key advancements was EBVs for the co-chairs' work. Do you have any examples that can be

the indicator of your chairship of GEO BON in development?

A: So a simple measure of success for me would be growing the BON network. Right now we have a relatively small number of BONs around the world. Most nations are lacking a BON, so I would like to be able to double the number of BONs in the first three years and then double it again by the sixth year. So that we are getting keeping up the momentum, but as we are adding BONs, it is not sufficient to just add BONs without global coordination. So an important indicator will be the degree of coordination among BONs and I think there are some ways of facilitating that we can establish some of them are technical informatics infrastructure that can help that, but often it's about clear measures of cooperation and collaboration when we're trying to produce an EBV product for the global scale for example. Or when we are trying to assess the impact of a driver like a climate change or habitat loss at the moment we're not bringing those that different types of information together across the BONs, so the BONs aren't contributing to assessment. And I'd like it also accelerated in the coming years.

Presentation: 3. Progress on Aichi Targets in Hindu Kush Himalaya

(Dr. Sunita Chaudhary, ICIMOD)

Q&A parts:

Q: Thank you for your great presentation and inputs to share with us. I have many things to ask you later but I have one question. What would be the very critical points for the biodiversity community, particularly for the Himalaya region to work with other disciplines something like the water cycle or food production another kind of addiction to environmental challenges that we could work together, ICIMOD and APBON and with other AOGEO community?

A: It is a small Institute but we collaborate with the global and regional Institutions. For instance, we are now collaborating with the CBD secretariat itself to assess the progress made in the region. We are working with the GPS so we are also trying our best we need to find the area of mutual interest. So freshwater is one of our major areas and at the moment we are producing freshwater handbooks for Nepal government demand. But this is an area where there is a very limited research, so there is very high possibility of doing collaborative research and we did have small projects on high altitude wetland from IGES before, but because of the limited funding and also the inaccessibility in the higher altitude areas, there is very limited research going on. So I think there is a great opportunity for the easy mode to initiate something with APBON,

especially to collect data on biodiversity on freshwater ecosystems.

Presentation: 4. Status and challenges in the Pacific

(Dr. Yimnang Golbuu, CEO, Palau International Coral Reef Center)

Q&A parts:

Q: My question is just a minor one. As you just showed MPA is quite effective to predator fishes, but it seems like for other feeding fish with different feeding type, it is not so significant difference between MPA and outside of MPA. What do you think to make differences among functional group of fish?

A: If we look at all the fishes, they are different. So there's twice as much fish in the marine protected area and non-protected area. But the reason why we see such a big difference in marine top predators is that that's a valuable fish. That's where the fishermen target, so for the other fish, the fishermen do not target as much. So that's why the fishes are not as much as inside and outside. But for the highly targeted or the valuable species shore fishes, the MPA does five times more in the MPA and outside. If you look at just all the fished, they are twice in the MPA and outside and that's because of the demand that the target for the top predators.

Q: I think in the first photo of your presentation you said about the impact of terrestrial inputs such as erosion and sedimentation. Do you think among management of terrestrial input will change the impact of climate change or whitening and is there such kind of management for not just the marine protected area but also including the protected area for the marine area?

A: The study we've been doing on these protected areas shows that even if we have very good enforcement in the marine protected areas, especially the ones near land and that we make sure there's no poachers and no other species in there, we see that impact from the land is so great that we can't even see the line in this habitat. So that's one of the ideas that in addition to these marine protected areas, we need to think about land, land management and land protection. Because for a small island like Palau areas near the coast, whatever you do on land would eventually affect the marine environment, so if you do a lot of construction and not careful, everything will be back from those activities or will affect the marine environment. And if we have more intense weather systems because of climate change so more intense storms and more intense rain in task owner make the situation worse.

1st Photo session



Session II Updates of BONs in the region

Presentation: ASEAN Centre for Biodiversity (Christian Elloran)

Presentation: China (Sino BON) (Xiaojuan Feng)

Presentation: Indonesia (Dedy Darnaedi)

Presentation: Japan (JBON) (Yayoi Takeuchi)

Presentation: Korea (KBON) (Chan-Ho Park)

Presentation: Malaysia (Zarina Sebli)

Presentation: Nepal (Mangal Man Shakya)

Presentation: Thailand (Yongyut Trisurat)

Session III Breakout group sessions

(Terrestrial, Freshwater and Marine working groups)

Following points were considered in the each working group, and reported back to the plenary in Session IV.

1. Planning observations and data integration (master site concept, on-going/future projects, “Indicators” of SDGs, etc.)
2. Data base, information platforms (for science community, user community)
3. Capacity building
4. Challenges under and post COVID-19 pandemic
5. Contribution to AOGEO (IPS; cross-cutting theme; knowledge sharing from biodiversity-related issues)
6. Cooperation with GEO BON

***In this session, the 3 working group discussed about points above, and delivered their discussion outcomes in session 4 by each working group leader.**

Session IV Engagement, networking and actions for 2021

1. Presentation : Key Biodiversity Areas

(Dr. Andrew Plumptre, Head, Key Biodiversity Area Secretariat)

Q&A Parts:

Q: Can these criteria be calculated or not?

A: If some of the criteria can be met, it tends to become an important area of biodiversity and a stronger, safer site. If there are multiple trigger species, because if for some reason you lose enough of a population of 1 trigger species then the others will still maintain the site until you can build numbers back up again.

Q: Thank you very much for your presentation. I think that KBA gives good criteria for the APBON sites to be operational in terms of conservation of biodiversity. So I think that this activity would be promoted further with the APBON members and also Dr. Yongyut.

A: I agree. What I see is that you're pulling together a lot of the important biodiversity information for your region and this is one way to turn that into a way of helping conserve some of that important biodiversity in your region. And when we form these national coordination groups, we very much encourage people from the scientific community where they worked for universities or museums to form the core components of that group because they have all the knowledge and the biodiversity activities. We also encourage that they partner with some of the conservation groups and also ideally government. In some countries, the government has interests and joins right at the start, in other countries they joined later. So it depends on the interests and the dynamics in the country, but certainly please consider whether you can pull a group together to form a national coordination group in your countries.

2. Reporting working group session outcomes:

-Terrestrial Working Group:

Presenter: Yayoi Takeuchi (National Institute for Environmental Studies, Japan)

-Freshwater Working Group:

Presenter: Yuichi Kano (Kyushu University, Japan)

-Marines Working Group:

Presenter: Masahiro Nakaoka (Hokkaido University, Japan)

*For the presentation material, please refer to Appendix 6.

Discussion session:

Comment: We've talked about a lot of different topics and in the workshop, we had last time we talked about plans for how to work with the supersites. We've got a fantastic group and we have new chairs, I am thinking about how to enact the TG plan and work more within the working group. I know MBON and APMBON have been doing active work but the other groups have done less. So how do the chairs think we can move forward and also what we talked about in the last meeting was we've got the CBD COP theoretically this year, we've got the IUCN meeting. How do the chairs pierce contributing actively and usefully to those regions those meetings because this region is always being neglected and it needs a much more strong and current voice?

Comment: Thank you so much for your inputs, the points that we would like to discuss are based on the strategic plans and those considering our contribution to CBD COP and also IUCN meetings.

3. AOGEO – Integrated Priority Studies, contributions to GEO Engagement Priorities, collaboration with other Task Groups

Discussion session:

Comment: I think we should emphasize the importance of considering nature and humans together. So the viewpoint of social-ecological system or the integration nature and human have to be emphasized in the future. But it seemed that the GEO community is somewhat behind about emphasizing the relationship or interaction between humans and nature. The impact of the COVID-19 pandemic is a good opportunity to emphasize the importance of nature and humans together. I think APBON is very familiar with this idea, so as an important role of APBON, we better emphasize observing both nature and humans in the GEO community.

Comment: That is an important point.

Comment: As for the COVID-19 impact, actually I didn't mention the impact on our research activity. I think many of us have a very negative impact on our productivity which made us stop monitoring or observation and the clear result. I think many the other groups also have the same situation, and we may work on this issue for the solution.

Comment: I heard from many international colleagues that many fieldwork and meetings are hardly limited, especially for us and biodiversity scientists, and educators, the activities are quite limited. But at the same time in parallel, we can have any kind of alternative idea about how we can overcome this kind of limitation. For example, Dr. Nakaoka in the marine group discussed online training opportunity and this could be a very education thing. And for the observations, we can raise some ideas about how can we continue or expand our biodiversity and ecosystem observations under this kind of restrictive limitations.

Comment: This is a very important point and I was thinking how about we use cutting edge technology, but you still need to be there and maybe in the future we can set up the remote control camera to observe nature. This is the idea from me. And anybody's ideas are welcomed.

Comment: Limitation is quite negative for the fieldwork but not only for online courses

but also citizen science could be promoted. For example, asking local citizens to take a photograph of the organisms and then we can do a combination with something like deep learning techniques or something may give us a chance to promote more citizen-based biodiversity monitoring activities. Of course, we sometimes need to go there to instruct how to do it, but if it's going well even under the situation of COVID-19, it will reduce our carbon footprint for frequent trouble problems. So there will have some merit in proposing such kind of activity. It's the comment from me.

Comment: Some of the two elements that could be useful. One would be developing a mechanism to force our students. Many of us have students across the region, they are the future of this region's research in future conservation. There is a way to bring in those younger researchers perhaps having worked together to do comparable studies in different regions but not only gather long term data but also teach some standardization collaboration and that kind of things. Because that kind of legacy would also be very powerful and in a time where travel is difficult by working together they can all achieve more in line with that developing more common standards so that when we collect research and data from different regions we know that data is fully comparable we know that in terms of understanding patterns across the region. It's not going to be confounded by different sets of collection mechanisms.

Comment: I am wondering because we have been talking a lot about impacts on COVID-19, but it's been already almost a year, so many government civil societies, and private sectors are taking actions and we already have responses on the ground. So we also need to see the implications of those responses on biodiversity and ecosystems.

Comment: I think we witnessed the enormous event for us to have the regular workshop is instead of offline meeting. This is a big thing for us to consider after the impact of COVID-19, so first I'd like to congratulate the chairs and also the Biodiversity Center of Japan Ministry of the Environment. And the second thing is that we are working on APBON is, we are thinking about data information and knowledge, but the key point to make the network of this data is how should we behave. This is the real-time to think about the wisdom of how should we live. In terms of the pandemic directed to the zoonotic disease, I think that now" how should we behave" or" how should we act" in terms of the behavior and also the in actions. So maybe we might think about this in terms of the new normal after this COVID-19 pandemic.

Comment: We've been hearing new normal or post-pandemic and that not only the post

time with someone said to me that we have to think about beyond pandemic. For me, it's a little bit difficult to understand the differences between after and beyond. But I think that's your comment is related to this kind of issue.

Comment: The difference is whether we have to vista to overcome this kind of pandemic by behaving differently.

Dr. Muraoka (announcement):

As we sent to this PPT material to all of the participants and you are all welcome to put your any kind of keywords or phrases idea, and please fill in your feedback to me and I will try to consolidate them and share with all of you.

It might be not only for the input to the AOGEO committee but also the future idea of APBON's future activities.

4. Plans for APBON activities in 2021

In this session, following points were considered. And free discussion ensued as below.

- APBON's contribution to GEO BON, KBA, IPBES and other organizations
- New APBON book
- Participation to 13th AOGEO symposium (March 3 - 5, 2021)
- Next APBON Workshop

Discussion session:

Comment: In addition to the separate working plan for terrestrial, freshwater, and marine, I think sometimes we think about land-ocean interaction or ecosystem connectivity project will be interesting. But at the moment, maybe we can do something in the Mekong basin, but we still don't have any data in the Marine system. But I think this kind of ecosystem connectivity research can be done not only on one side but also on several other sides. Maybe in the future, not right now, we have some working group members to think about this type of research connecting to different ecosystems.

Comment: That is a good point and also I remember that a few years ago we discussed the landscape approach of APBON.

Comment: It may be collaborative activities with different research studies in different types of ecosystems. So it will promote activity.

Comment: Building on that point, various countries in the Asia Pacific region have committed to the red list of ecosystems network. This is also something APBON could actively contribute towards. For example, we often call the terrestrial group to forest group, but we will know the forests are the only ecosystem in the region and these are systems that frequently fall between the gaps. So we might want to commit towards if we can, trying to red list of ecosystems but also have a more comprehensive overview. Because we want to make sure that the ecosystem and biological inventory of the entire region is represented in the world.

Comment: Green-nesting methodology?

Comment: However, the Red List of Ecosystems reflects the Red List of Species, which indicates how endangered an ecosystem is, taking into account the percentage of the

ecosystem lost, the degree of endemism, and the size of the area. Despite China's efforts to red-list ecosystems and the creation of hypothetical lists, most ecosystems are not red-listed. For example, the Red List of very challenging ecosystems has not been detailed. Also, the green listing of ecosystems is not the same as reading a species list because it uses a completely different system.

Comment: We don't have everything together in the region, and I think we should collect information and dates and do knowledge management for APBON and connect it to the global community.

Comment:

Thank you very much. I have some very similar kind of idea which is we might develop or something like APBON portal, then we would have the list of databases. I know we have many various databases in our region, and perhaps we might develop the publication list from our region and also the list or information sheet of each national BON or contributors and also the list of APBON mater-site very shortly. So this kind of APBON portal or data knowledge information portal site could be a kind of practice to be connected with the diversity network such as GEO BON. So after the presentation of Prof. Andrew this morning, I communicated with him that how we can connect the APBON and GEO BON. So this kind of platform suggested by Dr. Sheila should be one of the key items that we might want to consider more this year.

Comment: I agree with Dr. Sheila. We need to be very specific on this point, and the second point is that APBON's 2021 action plan calls for more Aichi Targets in particular, and OECM is taking shape, and I think this will be one of the highlights of the global biodiversity framework over the next decade. The region is very rich in indigenous and community areas outside of protected areas, and starting in 2021 we can start to work on capacity building and knowledge enhancement. We are also thinking of inviting someone to speak about OECM in our future webinar.

Comment: Thank you very much. That also very points. We'd like to consider this and at the same time, we share the importance of this kind of contribution of activity to engage this very important international agenda. Meanwhile, we might want to see who APBON could work with to lead that kind of connection activities or connections. So I suppose all of you have your networks or some connections. It would be good to convene those collections as a divisional community. We might improve this kind of idea into

reality. So if someone could consider this connection with the post-2020 global biodiversity framework, it would be nice.

Comment: Regarding the previous comment, I think it is the opportunity to find the funding support to do something like the appropriately protected area comparison in our region, so this might be an interesting research corporation.

Comment: I don't have any idea but does anyone have such an idea or do you know something update to that?

Comment: I can connect to the global WCPA, the OECM chairs, and vice-chair. Because sometimes they express their interests to provide kind of awareness webinars on OECM for the Asia-Pacific region. I think we are a bit behind and they would also work on how to enter data on WCPA data-based areas. Because CBD is putting a lot of effort to help other countries to meet their Aichi Target 11, so that's the reason that I want to talk about the OECM in the next webinar if possible. And we can explore funding and also like later on engagement. Funding is a major problem, but maybe they can help us to find networks or avenues. Anyway, we need to see.

Comment: I gave a seminar at the Peking University in December on some of my work. And the seminar that followed mine was from the Research Center for ecology and evolution in Beijing. They've been doing a national protected areas inventory for the whole China, including developing comprehensive measures for measuring protected error effectiveness. I could ask some of the people from that working group if they would be able to give a seminar next time. Because it could be useful for the rest of the APBON network.

The other thing I was going to say is, another publication we had last year and something will be publishing on again probably this year is wildlife trade. Wildlife trade is an organization that people overseas have looked into, but we know that it occurs throughout the region, and much of it is unsustainable and illegal wildlife trade. Something else we may want to consider within the working group is trying to at least get some measure of our local level trade for some countries in the region. Because for example, the paper that we published last September showed that 36% of reptiles are in the trade, the research we're doing now shows about 17% of amphibians are in the trade. But this is all based on subsets of data which is likely not entirely representative. So it would be very useful if APBON members were interested in about doing things like

market service it's in their area in a standardized way to get a more comprehensive overview of some of the species and trade and how sustainable or unsustainable it might be.

Comment: It's great to take concrete actions to be taken by APBON members.

I think we have many ideas. So let us try to utilize the APBON mailing list to exchange ideas and call the cooperation.

Another thing to ask is, does someone have any idea about our contribution to IPBES?

Comment: I recently joined the IPBES workshop. I think the general assessment of the ecosystem so far is already finished. However, they are trying to make a new scenario and modeling framework to make a future projection. Because in the IPCC social-ecological scenario, there's nothing that includes biodiversity. They can increase ecosystem services but they still lack exploitation. Of course, I understand GEO BON and APBON mainly focus on the ecosystem observation itself.

Comment: Recently, I learned from Dr. Yahara that IPBES is now discussing the scoping for the next round of assessments, which is already explained by you right now.

Announcement: (Dr. Muraoka)

This is our first experience of a one-day full workshop online, and we learned a lot through this opportunity. So we are always willing to have the workshop including their field excursions, but we don't know how the situation changes in the next half of the year. So shall we try to monitor the situation and also try to think what type of our gathering could be in this year.

So any ideas are welcomed and let's keep in touch with each other through the APBON mailing list.

2nd Photo session

