

Summary Report

APBON 3rd Web Seminar

1. Date: 22nd October, 2020

Time: 15:00-17:00 in Japanese Standard Time (UTC 06:00-08:00am)

(13:00-15:00 in Thailand, Indonesia, 14:00-16:00 in Philippines, China,
7:00-9:00 in Germany)

2. Location, Participants

- Webex Meeting Room
- 25 participants (21 participants and 4 from secretariat) from 9 Nationalities
- MC: Dr. Alice Hughes

(Center for Integrative conservation, Xishuangbanna Tropical Botanical Garden,
Chinese Academy of Sciences)

3. Program:

Opening and Announcement:

Secretariat of APBON (Mr. Saito: Biodiversity Center of Japan)

- welcomed all of the participants to join this 3rd APBON web seminar
- The agenda and rules of meeting were proposed
- Introduced today's MC

Presentation1: Dr. Po Teen LIM (University of Malaya)

“The use of molecular approaches in marine ecosystem health assessment and research in Malaysia”

Q&A Session

Q: About Part 1 of your talk, I am very impressed by the extensive fieldwork of phytoplankton covering all the coastal and offshore area in Malaysia. Question is whether if you compare this monitoring data with ocean color satellite sensors. Are there any ongoing studies on this subject?

A: We usually use the remote sensing data, especially trying to detect the movement of bloom along the Malacca strait. We found it was very challenging and difficult to obtain satellite data for ground truthing purpose. This is one of the limitation. If you look at the data base, some of the current data along the Malacca strait are not monitored

continuously. We hope to improve that we can actually do this continuous monitoring with the aid of satellite remote sensing data.

Q: Do you have any studies on strontium-to-calcium Sr/Ca ratios for climate change impact on coral reef, are there other techniques on coral reef bleaching?

A: I don't have enough experience to answer the particular coral reef bleaching, and also the Sr/Ca ratios, it is not within the scope of my study, but I am trying to look at the change of composition of zooxanthellae and to relate reef with marine conditions by using the molecular approaches.

Q: What is the relationship between plankton diversity, water quality and bloom of toxic HAB plankton? In the case of Japan, better water quality looks increasing one of the species consisting HAB recently.

A: Generally the harmful toxic species may not need to have very high density to cause problem. For example, some species, *Alexandrium*, that causes the problem in Hiroshima Seto Island Sea is one of the examples, the density of 2-3 thousand per liter is enough to cause shellfish to be toxic. So I think it depends on the risk group. For high biomass bloom former, the density needs to be very high in order to cause harmful effect.

Q: It is impressive that phytoplankton diversity is very low around Pulau Pinang. Is this low diversity caused by any human impact?

A: For the area around Pinang Island, I believe that the eutrophication is getting very severe and a lot of nutrients are being discharged in the coastal water in Pinang. With many marine activities also affecting, this is the reason for phytoplankton diversity and the formation of high biomass monospecific bloom.

Presentaton2: Dr. Laetitia Navarro (GEO BON)

“The Group on Earth Observations Biodiversity Observation Network:
Update on activities and post-2020 vision”

Q&A Session

Q: In case of marine ecosystems, we are trying to increase more biological variables to EOVS (Essential Ocean Variables), and I always wonder how we relate EBVs and EOVS. Do you have any ideas?

A: A couple of years ago in a publication lead by the Marine BON, we did the efforts on

mapping the EVBs and EOVs frameworks. I think this is source or information what you are looking for: *Muller-Karger FE, et al. (2018) Advancing Marine Biological Observations and Data Requirements of the Complementary Essential Ocean Variables (EOVs) and Essential Biodiversity Variables (EBVs) Frameworks. Front. Mar. Sci. 5:211. doi: 10.3389/fmars.2018.00211*

Q: I am interested in developing the EuropaBON. Do the institutions in this regional BON have any connections with their national GEO office?

A: When we designed the project we mostly focused on the regional level so we didn't yet look so much to the national level (with some exceptions). However, I see how this connection could quite easily be done with national GEO in Germany. Beyond Germany, this is definitely important and it will be a key point to connect with GEO focal points in each of EU countries. I will bring it to the EuropaBON coordinating team for further thoughts.

Q: What is the most important contribution to the promotion of GEO BON activities in your capacity as the Executive Secretary the GEO BON?

A: I think what's the key is to develop the network with new working groups, BONs and task forces. Because, when I started my position 4 years ago, we had just adopted the new structure and we were going to think about the new implementation plan. But at that time, all the EBV classes were not presented by working groups for instance. And we needed groups to work on cross-cutting issues such as data management, remote sensing etc... And now, we have each EBVs classes represented by working group, we have more thematic BONs and more regional BONs, and several cross-cutting task forces. I think development of the network is a big personal achievement. And to some extent the EBV 2020 initiative is another achievement because we didn't know what to expect when we started, and now we have almost 100 EBV and EBV-derived data sets suggested by the groups' experts. This is very impressive and shows that a lot of things happened and were developed in those past few years.

Q: Adding on that, what do you think were the greatest challenges in past few years to moving forward, and what do you think a priority for next 5 years to GEO BON? It is not just in terms of moving but also in terms of insuring the important biodiversity

A: I think one of our biggest challenges is the financial supports and how this could limit the networking because it is a volunteer-based network. Despite so many people want to engage, we didn't always have financial abilities to organize the workshop which

provides the spaces and all the experts to meet. And in the case of APBON, which is supported by the Ministry of Japan, is really a fantastic example. The future secretariat in Montreal plans to establish a solid fundraising strategy and I hope this will help to support more members in network and also in achieving their ambitions and goals in GEO BON.

Q: As we discussed about the post-2020 global biodiversity framework, which took place on February this year, there were some discussion on database target on global biodiversity framework. Do you know any of those discussions being continued or taken place in the BON type framework such as the standardized national biodiversity action?

A: It has some progress that we have not entirely reached yet. So this discussion now is around target 18, we made the joint into invention in February together with GBIF at the 2nd CBD Open Ended Working Group meeting. The CBD opened documents on the framework for comments this summer, and the need for national biodiversity monitoring is somehow part of the monitoring component of this target 18, but it is not reaching the phrasing of the target itself. And it's not yet clear to me how important this monitoring components are going to be in the framework. So we are keeping our eyes on it. I think we made some progresses on this target and we are almost there, but there're still some work to be done. Any supports from GEO BON members are more than welcome.

Q: May I ask what your role will be in the new GEOBON Secretariat?

A: I went back to research officially starting on the 1st October. Now I'm a researcher at iDiv for at least one year, but I am still allocating time every week to GEO BON activities to help the future secretariat. In the future, I don't expect to have a role to be related to secretariat itself, however I am still co-leading the GEO BON Policy Task Force, this is another personal achievement as I talked about earlier, which is very fascinating and interesting. So I would love to continue doing that, and I still hope that I could engage with the future secretariat on topics related to conservation policies.

General Discussion: (Exchange of info)

- Announcement about AOGEO activities (Dr. Muraoka)

First announcement is, regarding the 3rd AOGEO workshop

(<http://aogeo2020.csp.escience.cn/dct/page/1>) to be held in China next week, it is actually this week they are doing the training workshop. If anyone who wants to

participate in this online virtual workshop next week, please visit this website to find the agenda. However, even at this moment, the agenda is not fixed yet.

Second, Japan GEO is going to plan next AOGEO symposium sometime in the next February 2021. And the format of this AOGEO symposium is not decided, maybe we'll organize it in online format. Once I get information about the AOGEO Symposium, I'll distribute it to all APBON colleagues.

- There will be APBON online meeting, in addition to the webinar. Any ideas and comments are all welcomed.
 - It sounds fantastic. Last year, we were working on the TG plan, it would be good to think about working group that works on that, so that we can move things forward.
 - In the regular webinar, the presentations will be the main parts, on the other way in the APBON online meeting, we want to focus more on the strategic plan and discussions rather than the presentations. This is how we are thinking about at this moment.
 - Some of the APBON members will join the committee meeting on 11/4 and discuss about the idea of APBON workshop. This is fully agreed by one of the co-chairs.
 - The schedule of 4th APBON web seminar will be considered on sometimes during November.
 - As Dr. Alice mentioned, action plan should be developed beyond our strategy plan. It is expected we can get the review report of manual script very soon, and hope to discuss more about our action plan based on the working group or discuss about how we can develop the more national BONs in our vision.
 - For the connection of the AOGEO, there is another important part of APBON. Because APBON is one of the longest and intensive group. We might deliver our insight and idea to try work together with other organization.

Closing and Announcements: Secretariat to APBON

- The date of 4th and 5th APBON Web Seminar will be discussed on the extended steering committee on 4th November.
- And for the presenters and MC of the 4th seminar, anybody is welcomed.
- The agenda and schedule will be informed by Secretariats as soon as it fixed.