

Summary Report

9th AP-BON Workshop

■ Outline of the meeting

Date: 21st – 22nd February, 2018

Venue: Kasetsart University, Bangkok, Thailand

Co-Chairs: Tetsukazu Yahara (Kyushu University, Japan); Sheila Vergara (ASEAN Center for Biodiversity, Philippines); Eun Shik Kim (Kookmin University, Korea)

Participants: 71 persons and 14 nationalities

■ Objectives:

- Sharing the current status of biodiversity observations in the Asia-Pacific region
- Coordinating our contribution to IPBES
- Discussing a new work plan towards 2020

■ Outline of the proceedings

<Opening Session>

Mr. Hisashi Kawagoe

Director General, Biodiversity Center of Japan

Firstly he expressed his deepest gratitude to all the kind people from Kasetsart University, especially grateful to Dr. Chongrak, acting president of Kasetsart University and Dr. Nikhom, Dean of Faculty of Forestry of the university. Then, he said that his appreciation also goes to Dr. Yongyut Trisurat, Head of Biology Department, Kasetsart University as without his effort and support the workshop would never have been held.

He highly appreciated the participation of IPBES members, because he is confident that IPBES's contribution will deepen our discussions. He briefly explained the history of APBON activities from 2009 (establishment) to present, and emphasized that AP-BON has contribute to the global biodiversity conservation by integrating and publishing data which are used for policy-making.

He concluded his remark saying that “we are here today to share the current status of biodiversity observation in the Asia-Pacific region in order to discuss our new work plan towards 2020. Knowing that, this workshop will allow us to strengthen our collaboration between APBON and IPBES.”

Dr. Tetsukazu Yahara
Professor, Kyushu University, Japan

In his remark, he said the 9th AP-BON workshop is a turning point, explaining that it is necessary to further promote the network of various activities of observation, evaluation and conservation of biodiversity. Especially next year, we plan to announce the IPBES Asia Pacific Assessment. At this workshop, I am inviting key people of IPBES evaluation, specifically the regional evaluation chairperson, and how to improve the evaluation and gaps in the future evaluation. It is possible to discuss each other about how to fill in. This workshop is an extremely important as It's going to be a fruitful discussion towards the success of APBON activities going into 2020, where we should achieve our goals for Aichi Targets.

Dr. Nikhom Laemsak
Assistant Professor, Kasetsart University, Thailand

He introduced the Faculty of Forestry of Kasetsart University in brief. The Faculty of Forestry is the only academic institution in Thailand offering teaching and research in the diverse fields of forest resources, biodiversity, and environmental science of Bachelors of Science, Masters of Science, and Doctorate of Philosophy Degree, in both regular and international programs.

He said the 9th APBON Workshop will provide a platform for scientists and interested scholars to exchange knowledge and discuss our collaboration, standardization, and harmonization of biodiversity observation in terrestrial, freshwater, and marine ecosystems. In addition, I have been informed by Prof. Yongyut Trisurat, Co-chair of this workshop, that the key person of IPBES Asia-Pacific Regional Assessment will present key findings, massive knowledge gaps, and capacity-building needs. It will be a very excellent opportunity for scientists and policy-makers to explore science-policy-into-action mechanisms to enhance the biodiversity and human well-being in Asia-Pacific region, in particular on collaboration between APBON and IPBES.

Mr. Chongrak Wachrinrat
Acting president, Kasetsart University, Thailand

In his remark, he said "I believe that today's workshop under theme, the 9th APBON Workshop, is taking place at the right time, not only to support the IPBES Asia-Pacific Regional Assessment that will be presented to IPBES panel next month, but also to continue the preparation of IPCC unintelligible diversity targets 2017 and the UN SDG 2030. Actually, I used to be the Dean of the Faculty of Forestry also. I think in Thailand now -something that Prof. Yahara said- the forests seem

to have stopped decreasing. But I'm not sure actually, it's depending on the data. Thailand contains a rich biodiversity and its biodiversity is one of the most recognized biodiversity hotspots. He introduced Thailand is also really lucky because we have a real rainforest in the Southern part and also we have a very dry area. So that means we have many types of ecosystems. We have a rich biodiversity in terms of ecosystems and genetics which is very important. So as you can see, it's a problem for us to figure out how to conserve the rich biodiversity of Thailand. It is a challenge for Thai society. And another challenge is finding how to use the biodiversity because of the cost of conservation. This network is concentrated on the conservation of biodiversity, but please pay attention to how we can use biodiversity for sustainability. The target is to use less for more.

« Session 1 »

Keynote Speech 1

Dr. Asdaporn Krairapanond

Deputy Secretary General, Office of Natural Resources and Environment Policy and Planning (ONEP), Thailand

In her speech, she said we are going to have a very important meeting at the end of this year which are a conference of the Parties to the Convention on Biodiversity and also the Conference of the Parties to the Ramsar Convention on wetlands. And as mentioned by many people, we are going to have IPBES coming up next month and hopefully the outcome of this workshop is going to have valuable input to all of those meetings. She told we have 17 goals to accomplish by the year 2030, as mentioned by Dr. Chongrak. And among the 17 goals, 5 of them directly relate to biodiversity which include goal no.6: concerning clean water and sanitation, no.12: concerning sustainable consumption and production, no.13: climate change, and goals no.14 and no.15 are, of course, completely related to biodiversity. Goal 14 is biodiversity in marine and coastal areas and goal 15 is terrestrial biodiversity. We can see that, how biodiversity is important because it's already related to 5 of the 17 sustainable development goals. 5 of the SDG related to biodiversity, of course, without listing natural resources and farming, take form as facility on all of our SDG in moving towards achievement of these 5 goals in 2030. Also, as everybody on Earth has experienced this year is climate change phenomena. You can see that we have unusual conditions of climate. You may be thinking about why I am mentioning climate change in a biodiversity forum. It is because climate change has a direct impact on biodiversity. If the climate is changing, the biodiversity and ecosystem will change as well. Biodiversity can also be the means of implementation that can heal climate change problems as well because forest ecosystems can serve as a carbon sink as well as eventually climate change problem alleviation. Asdaporn expresses that she believes one of the key purposes of APBON is to find ways to make the

public and policy-makers understand the economic importance of conserving and sustaining the biodiversity. She continues to explain that with conservation and sustainable use they will be able to provide economic security for both today's generation and future generations to come.”

Keynote Speech #2

Dr. Tetsukazu Yahara

Professor, Kyushu University, Japan

In his speech, he said “I'd like to introduce AP-BON in the context of its link to GEO: Group on Earth Observations and the new GEO Strategic Plan. I elaborate the importance of global bodies on biodiversity: in Research (Diversitas now Future Earth), in Assessments (IPBES), in Observations (GEOBON), and in Policy (CBD). He highlighted important starting points of GEOBON and relatedly he provided a timeline of APBON meetings, publication outputs and presented the APBON visions or objectives. He provided a background and findings on integrative observations and assessments in Asia sponsored by MoEJ, including trends in forest coverage (%) and their proximate causes including wood, food, stimulants, crops production, road and populations density, etc.; on impacts of wood trade on bird extinction (Nishijima et al (2016) and evaluating the impacts of wood production and trade on bird extinction risks. (Ecological Indicators 71: 368 – 376.) He Highlighted that biodiversity is both a global and national issue, one of them being the threats of dam construction and global warming upon freshwater fish diversity in Mekong Basin (Kano et al. 2016, Plos One). He reported on a) the development of quantitative areas for MPAs based on the EBSA context, b) herbarium records found that tree species diversity and richness is high in Sarawak and West Kalimantan. He informed the meeting that APBON is now at a turning point in a changed environment since S-9 ended in 2016, the IPBES assessments are ongoing, the GEOBON has a new structure. He presented some initial directions for APBON 2018 and beyond, highlighting the need to make data more discoverable (structure, content and publication), the need to support networking, monitoring and modeling and links to work on the ground such as restoration and establishing supersites that host forest plots in the region. He reiterated the importance of a regional network (ACB, AP regional assessment, ILTER EAP, GBIF Asia, IUCN Asia Office, ATBC Asia Chapter and Future Earth Asia Centre).”

Keynote Speech #3

Mr. Mile Gill

(Co-chair of GEO BON)

In his speech, he said “I'd like to deliver a keynote on Biodiversity Observations for Decision-

Making. I note that there is increasing demand for biodiversity data, however, people are coming back to the same datasets which raises the need to streamline biodiversity information management processes. Other biases identified include taxonomic bias towards monitoring large mammals (charismatic species) thus the birth of a globally harmonized and interoperable biodiversity observations. I provide a background of GEOBON, its focus on biodiversity change, its governance structure and approaches from both a top-down and bottoms up focus.

I underscore some lessons from APBON that could help other BONs, including opportunities to test the EBVs, locating and integrating observations, advance cross cutting issues and other SBAs at regional scales, contribute to BON in a Box, co-develop indicators and their visualization.”

Keynote Speech #4

Dr. Yoshihisa Shirayama (JAMSTEC)

MEP of IPBES

In his speech, he said “I’d like to introduce IPBES and its proper pronunciation. I have discussed the relevance of IPBES and its role in facilitating information towards policy making, I articulate that IPBES is an independent intergovernmental body established in 2012, now with 126 members. I emphasize that Biodiversity and nature’s contributions to people underpin almost every aspect of human development including production of food, clean water, climate regulation and disease control. The work of IPBES can be broadly groups into 4 complementary areas: expert assessments, policy support and building capacity and knowledge and communication and outreach. I’d like to present the IPBES structure including the plenary, secretariat, expert groups and taskforces, Bureau, Multidisciplinary Expert Panel and the stakeholders and observers. Also I’d like to show you some examples of IPBES outputs (pollinators, pollination and food production – based on 3000 scientific papers). Finally, I’d like to encourage participation to the IPBES of those scientists from the room.”

Report of Progress of AP-BON

◆Terrestrial Biodiversity Group

Presenter: Dr. Yayoi Takeuchi

In her presentation she mentioned that APBON works with a variety of networks such as ILTER and CTFS etc. but there are still plenty of groups not included in the APBON network. Also, APBON has encouraged the enhancing of observations such as surveys on flora and fauna. She continued to say

that APBON is currently working to encourage the involvement of citizen scientists and there are projects around Japan to monitor a large amount of sites. She mentioned that there is a lack human resources and that filling those gaps will be important going forward.

She continued her presentation with an introduction about 2 currently studied forest plots in Malaysia. The plots can be compared with phenology and meteorology and in terms of biodiversity, the major taxa inventory has already been completed at least once. She posited that these plots can function as core plots and, in Lambir Hills there is a system of canopy observation in place to capture the very active canopy phenology.

She elaborated on the global flowering events that have happened between 2000 and 2015 which have caused an interesting ecosystem change. She explained how the migration of giant honey bees causes mass pollination events, which in turn causes mass fruiting events that lead to increase wildlife migration and, fortunately for persons living in these areas, end up with extra chances for hunting and gathering.

She concluded her presentation by touching on challenges that are currently being faced by members of APBON. These challenges include spatial distribution of observation sites and information, delivery of knowledge to the users, difficulty standardizing methods and approaches and identification of KBAs for planning in the region.

◆ Freshwater Biodiversity Group

Presenters: Dr. Yuichi Kano and Dr. Shinichi Nakano

Dr. Kano and Dr. Nakano presented jointly about freshwater biodiversity and FWBON, a new biodiversity observation network. In the presentation, Dr. Kano explained some achievements of FWBON so far that include biodiversity informatics training sessions, data papers and meetings and workshops on conservation held in the Asian region. Dr. Kano continued to speak about the agenda for the second day's working group and his determination to publish a data paper using the information gathered from that group.

Dr. Nakano elaborated on the inception of FWBON by explaining how Dr. Eren Turak reached out to specialists in the field with the intent of creating a new freshwater biodiversity observation network. He continued to explain that FWBON exists under the GEOBON umbrella, different from APBON that stands alone, and that there are already 140 people that have joined the observation network.

◆ Marine Biodiversity Group

Presenter: Dr. Takehisa Yamakita (JAMSTEC)

Dr. Yamakita presented about marine biodiversity observation. He began his presentation explaining the progress of MBON and showing some details about the status of marine observation in Japan. He continued to explain that there are programs conducted by the Ministry of Environment of Japan that are trying to conduct a 100 year area study with multiple variables. He elaborated how his research in Thailand and his research until now have been useful as evaluation materials and how the services conducted by the Ministry of Environment of Japan allow for the collection of important data.

He mentioned that collecting, extracting and using the data as evaluation tools is necessary and collaborating with economists to discover stock and value of ecosystems is currently in process. He continued to say that the working group tomorrow will focus on collaboration and networking with other groups, creating standard methods and new technology for observation as well as the simplification of data overall. He concluded his presentation by saying that capacity building and funding is quite important because the cost of research.

Closing Session

◆ Terrestrial Biodiversity Working Group Summary

The group of the terrestrial biodiversity, discussed about how to contribute to the terrestrial activities of AP-BON. Dr. Yayoi Takeuchi touched on monitoring biodiversity, ecosystems and canopy observation systems. Then, she explained the importance of the data sharing and capacity building. As of the data sharing and networking, other participants also preached about need for that. We again recognized the data sharing including harmonizing data with land use is important seriously. Dr. Maofand Luo elaborated the Chinese forest biodiversity monitoring, and referred to the networking system such as NSII (National Specimen Information Infrastructure). Dr. Bayu Adjie, Director of Bali Botanic Garden explained about the plant diversity observation of small islands in Indonesia. Dr. Alice Hughes of XTBG presented the mapping patterns of diversity & endemism across Southeast Asia, and she touched on developing tools for standard monitoring /assessment. Prof. Malcom Demies of Kasetsart University reported about the Research for Intensified Management of Bio-rich Areas of Sarawak, he said that a new scientific initiative is necessary and timely. Then, the group discussed on AP-BON work plan towards 2020, such as “What we need for networking forest plots.”, “What common research subjects/goals can integrate us.” And “How we link to GEO Social Benefit Areas, SDGs and IPBES.

◆ Freshwater Biodiversity Working Group Summary

The freshwater group is not a well-developed group. The group already launched in 2010 but discussion was still immature. This time, 4 out of the 5 people in the group were the first person to attend the freshwater working group. An introduction of the Freshwater BON was given to the group, with the title “What is a Freshwater BON?” It is a voluntary activity affiliated with the GEOBON and it has 136 members from 52 countries. The priorities for the freshwater BON for the coming 5 or 6 years were introduced, 1. building our membership in the region, 2. global harmonization of fish and macroinvertebrate sampling protocols, 3. Data mobilization focused on the freshwater information platform (FIP), 4. freshwater ecosystem classification that supports IUCN red-listing of threatened ecosystems, 5. establish connection between some of the important research centers in Japan, China, India, and Eastern Russia. These 5 priorities, at this stage, are what the Freshwater BON wants to conduct for the coming years. After that, the 4 speakers gave talks about the individual fish biodiversity monitoring in Asia.

◆ Marine Biodiversity Working Group Summary

The Marine Group consists of 10 members. Each of us had a presentation and discussed the present status and future progression and future targets on experts. Especially, those people talked about MBON and giant plan, and database in their institutes, and also global collaboration, SDGs, and evaluation of systems for monitoring fauna. Considering these presentations, we discussed and identified these knowledge gaps. First, Regional Network (AP) of marine scientists and those working on the field in the Asia-Pacific region. Not information, but there were collaborations regarding some early programs but after those programs finished. At first moment, the network needs to be rebuilt. So, APBON will be a great opportunity to have such kind of network again. And also, there are some politics regarding collaborations. Also, there is a difference of methods. Not only different programs but difference of ecosystems. Because marine ecosystems include several different types of ecosystems. Even including forest areas with bungalows, and also areas in-between freshwater and saltwater. These are very diverse ecosystems. These people have different have different projects. We also recognized technical gaps about coordination and data-basing. Especially, GPS coordinates are not working underwater. We should try to find a way to coordinate data. Also, about the database. Host for AP database has not been exactly decided especially for large sized papers that include image or video. So that’s an issue to discuss.

