

## 議事概要(英・日)

# Summary Report

20<sup>th</sup> APBON Web Seminar

### 1. Date: January 20th 2024

**Time:** 15:00-17:00 in Japan, South Korea

13:00-15:00 in Cambodia, Thailand, Indonesia, Vietnam

11:45-13:45 in Nepal

14:00-16:00 in Malaysia, Philippines, China

20:00-21:00 (1<sup>st</sup> February) in Hawaii

### 2. Location, Participants

**Onsite venue:** Webex Meeting Room

- Total participants: 24 participants (20 participants and 4 secretariats) from 7 nationalities
- MC: Dr. Masahiro Nakaoka (Hokkaido University)

### 3. Program:

#### **Session 1: Seminar on the latest research on coral reefs in the AP region**

Moderator: Dr. Takehisa Yamakita (JAMSTEC)

#### **Presentation1: Dr. Nina Yasuda, University of Tokyo**

“Genetic diversity and hidden species boundaries of corals”

#### **Summary of presentation**

Dr. Yasuda reported on the current status of coral reef bleaching caused by rising temperatures and other factors, stating that more than half of the world's coral reefs are under threat and that discussions on conservation, which began when the Nagoya Protocol was drafted, are continuing until COP15, held this year. He explained about Marine Protected Areas (MPAs), and stated that the conditions for effective establishment of MPAs in Japan should include connectivity, genetic diversity, and future habitat change, among others. The growth of coral reefs was introduced.

She also noted that coral reefs have been moving northward since the 1980s, and that southern fish species have been moving northward along with them, resulting in significant

habitat changes. Furthermore, he stated that the objective of this study was to confirm genetic diversity by comparing coral reef periods by comparing sea areas.

Based on these results, he introduced seven requirements for areas of high importance in terms of biodiversity (EBSAs), including the uniqueness of the area and the importance of the growth process. Also. Based on these perspectives, he commented on the expansion of conservation in Okinawa, Kumamoto, Nagasaki, and other prefectures as areas with high conservation urgency but narrow marine protected areas based on data gap analysis.

In conclusion, although the survey found more species than expected, there is still limited data on genetic biodiversity in the ocean, and a database needs to be established. He also commented that more genetic diversity data will be needed in the future, as further northward migration of species is expected in light of the effects of climate change and other factors, and called for broad-based cooperation in the survey.

#### **Presentation2 : Dr. Kakaskasen Andreas Roeroe, Sam Ratulangi University**

“The status of coral reef in Indonesia”

##### **Summary of presentation**



Dr. Roeroe firstly introduced himself by stating that his university is located in the famous coral reef triangle (Philippines, Indonesia, Malaysia, Papua New Guinea, etc.). He also described the characteristics of the coral reef ecosystem system, including that it is the largest ecosystem on earth, rich in protein and medicine resources, and plays a major role in the conservation of coastal ecosystems. He also introduced the characteristics of the coral reefs spread throughout Indonesia, where 40% of the world's coral reefs are concentrated and inhabited by a wide variety of species. He then cited marine pollution, the effects of destructive fishing, and rising water temperatures due to marine pollution from deforestation and other factors as factors that contribute to coral bleaching.

He also pointed out that the final factor affecting the deterioration of coral regenerative capacity is the stress from the land, and that how to prevent pollution from the land is an important issue.

As for future tasks, he stated that he is planning to construct a database of genomes in Indonesian coral reefs and to conduct a survey of mid-reef corals.

#### **Session 2: Discussion on APBON's contribution to CBD-KMGBF**

In Session 2, APBON's contribution to the CBD-KMGBF was discussed. Chair Nakaoka presented the following materials, introduced the agenda, and recommended viewing the previous webinar in which the topic was discussed for discussion.



20<sup>th</sup> APBON Webseminar  
January 19, 2024  
15:00 - 17:00 JST  
6:00 - 8:00 UTC

## 2: Discussion on APBON's contribution to CBD-KMGBF

### Agenda

1. Reviewing our activities up to 2023
2. Announcement of the 15<sup>th</sup> APBON Workshop on Feb. 21-22, 2024 in Tokyo
3. Preparation for the goals of APBON Workshop and follow-up activities

Video Recording available at (internal use only)  
<https://omc-webinar.webex.com/omc-webinar/jdr.php?RCID=87f830ec69041669c835d28eeade8cba>  
 Password: gXBTY8m\*  
 A total length (2h11m)

## Past activities

**Dec 2022:** CBD KMGBF adopted at COP15.

**Feb 2023:** 14<sup>th</sup> APBON Workshop in Fukuoka: Start discussing our activity plans in response to the outcome of CBD KMGBF



**April 2023:** 16<sup>th</sup> APBON webinar. Andy and Marina (GEOBON HQ) presented GEOBON's strategy for contributing to CBD KMGBF.

**Aug 2023:** Questionnaire surveys sent to APBON and APMBON community, asking to identify availability and gaps of data, knowledge, and capacity (analyses in progress)

**Oct 2023:** GEOBON IC Meeting at Secretary Office of CBD, discussing the next step for GEOBON's contribution to CBD KMGBF

**Oct 2023:** GEOBON Global Conference in Montreal. Hiroyuki, Alice, Yayoi and Massa gave talks on related subjects.

Dr. Nakaoka also introduced the past activities of APBON and presented the following activity plan.

### Plans for early 2024

**Jan 19, 2024:** 20th APBON (+APMBON) Webseminar (this meeting)



**Feb 21-22, 2024:** Next on-site APBON Workshop in Tokyo

-> Some output possibly requested before next AHTEG in early March?

**Apr 2024 or later:** AOGEO meeting (in Japan)

**Apr 24, 2024:** APMBON session on "Marine biodiversity monitoring and research in East and Southeast Asia" in 2nd UN Ocean Decade Regional Conference & 11th WESTPAC International Marine Science Conference (Bangkok, Thailand)

He then introduced APBON and the survey that APMBON is currently working on and reported its progress as follows.


### Ongoing APBON (APMBON) surveys

**APBON Survey to identify availability and gaps of data, knowledge, and capacity (August 2023)**


**APMBON Survey on marine biodiversity monitoring and blue carbon research in Eastern and Southeastern Asia (September 2023)**

APMBON Survey available at the following google form

<https://docs.google.com/forms/d/1StGiRHFcaPfOKBmq8VPmIX-qVMerWuCkxuxqfMKxDaE/>



## Contents of the surveys



**APBON Survey**

Q1. First, what is your country (or region)?

Q2. Please list existing information on biodiversity and ecosystem observations in your country or region.  
data type, description, region, taxa, no. of surveys, start and end years, agency, data availability

Q3. Using the list above as a guide and considering those data sources expected in the Kunming-Montreal GBF, please list the data that we need, focusing on coverage that is lacking for your country or region.

Q4. Considering the data we need, are there any broad observation gaps for themes/regions (terrestrial, freshwater, coastal, marine)?

Q5. Please comment on the status of long-term monitoring sites in your country or region


Q6. How can the observation activities or facilities in your country or region be considered as part of a global biodiversity observation system (GBIOS; see attached presentation by GEO BON)? What are the strengths of APBON to advance biodiversity observations for the globe?

Q7. What kinds of engagement do we need (or want) to fill the gaps in data and knowledge, as well as address expectations for national, regional and global cooperation? This can include engagement with observation communities, users, etc.


Q8. Are there opportunities for cooperation with the national GEO secretariat or relevant committee?

Q9. Please list what is needed for capacity development for different sectors (researchers, data users including facilitators who bridge observations and policy and citizen scientists, indigenous Peoples and Local communities.

Q10. Please list needed aspects of data infrastructure.



## Contents of the surveys



**APBON Survey** (Modified from the APBON survey to cover more specific aspects on marine biodiversity monitoring)

Q1-4: Demographic questions

Q5. Please list existing information on biodiversity and ecosystem monitoring in your country or region.  
5A: Name, Description, Data type, Taxa, Start and end years, Number of surveys, Agency, Data Availability

Q6. How have the data from the above-mentioned programs been used in practice, e.g. for actual impact assessment, conservation or ecosystem managements, and what are the major challenges to keep doing the program in the long run?

Q7. What types of data are lacking in the above-mentioned programs for promoting effective biodiversity conservation? Please note the general data type (spatial, temporal, taxonomic, thematic, etc.) and provide brief summaries of key elements as needed.

Q8. Considering the needs for promoting effective biodiversity conservation, are there any broad observation gaps in your country/regions?

Q9. Please give us the general comments on the status of long-term monitoring in your country or region, focusing on the points below: A: Types of data, B: Locations of biodiversity observation, C: Data ownership and accessibility, D: Data curation, E: Language of data, F: Resources (fund, manpower, etc.) to continue long-term monitoring, G: Involvement of research activities by APMBON members and others

Q10. How can the observation activities or facilities in your country or region be considered as part of a global biodiversity observation system, such as OBIS, GBIF and GBIOS? What are the strengths of APMBON to advance biodiversity observations for the globe?

Q11. What kinds of engagement do we need (or want) to fill the gaps in data and knowledge, as well as address expectations for national, regional and global cooperation? This can include engagement with observation communities, users, etc.

Q12. Please list what is needed for capacity development for: A: local researchers, B: data and knowledge users (governments, society in general, etc.), C: Data managers, D: facilitators who bridge observations and policy and E: Data collectors

Q13. Please list needed aspects of data infrastructure

The status of responses to the survey at this time was reported as follows.





## Tentative results of the survey



● **APBON Survey**  
13 reports (from 8 countries/regions)

● **APMBON Survey**  
11 reports (from 7 countries/regions)

2 overlaps

The scope of data covered by APBON at this time was also reported, and it was reported that the survey covers a wide range of areas.

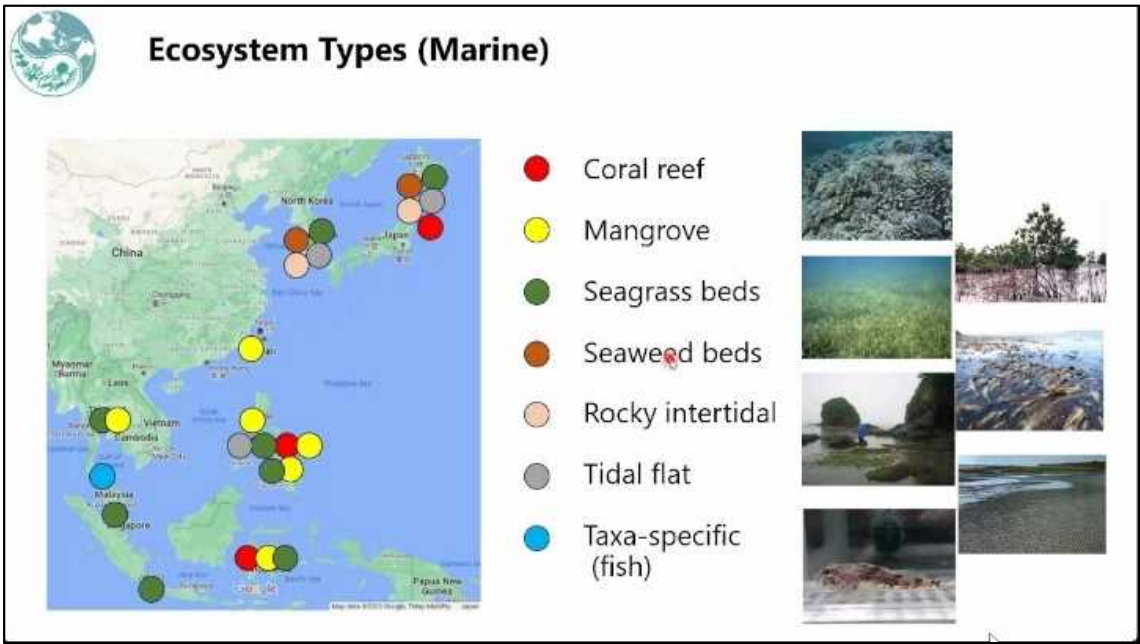


## Types of data and coverage (APBON)

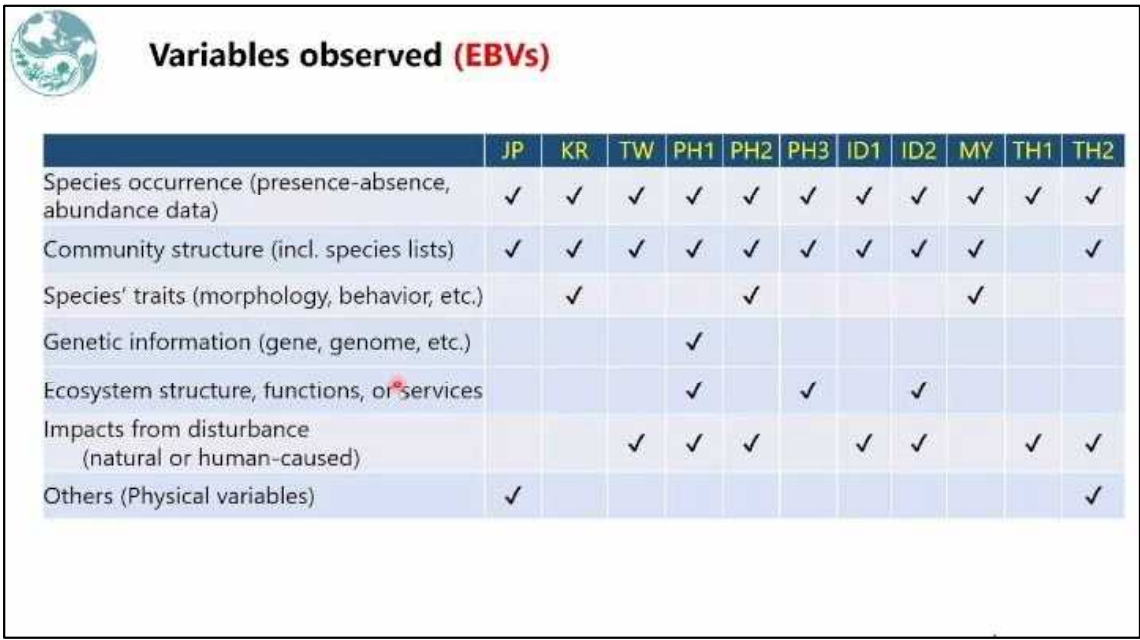


- In situ observation data
- Database from various sources
- Internet media (SNS etc.)
- Remote sensing
- Herbarium
- eDNA
- Policy data (e.g. protected area)

The ecosystems that are being implemented in the marine sector are as follows.



The EBVs are as follows.

The slide titled "Variables observed (EBVs)" contains a table with 12 columns representing different countries/regions (JP, KR, TW, PH1, PH2, PH3, ID1, ID2, MY, TH1, TH2) and 8 rows representing different types of variables. Checkmarks indicate where data is observed.

### Variables observed (EBVs)

	JP	KR	TW	PH1	PH2	PH3	ID1	ID2	MY	TH1	TH2
Species occurrence (presence-absence, abundance data)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Community structure (incl. species lists)	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Species' traits (morphology, behavior, etc.)		✓			✓				✓		
Genetic information (gene, genome, etc.)				✓							
Ecosystem structure, functions, or services				✓		✓		✓			
Impacts from disturbance (natural or human-caused)			✓	✓	✓		✓	✓		✓	✓
Others (Physical variables)	✓										✓

The following is a summary of the research organizations and funding received.



## Variables observed (EBVs)

	JP	KR	TW	PH1	PH2	PH3	ID1	ID2	MY	TH1	TH2
Species occurrence (presence-absence, abundance data)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Community structure (incl. species lists)	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Species' traits (morphology, behavior, etc.)		✓			✓				✓		
Genetic information (gene, genome, etc.)				✓							
Ecosystem structure, functions, or services				✓		✓		✓			
Impacts from disturbance (natural or human-caused)			✓	✓	✓		✓	✓		✓	✓
Others (Physical variables)	✓										✓

Language issues were also surveyed and the responses are as follows. Here, data were stored in local languages, including Japanese, and the need for translation was recognized.



## Language issues



- Local languages are necessary when non-scientists are involved in the programs.
- Additional resources (manpower and money) are required to translate them to English and put them to global databases.
- Automatic translators will solve this problem?

Based on the above results, the following issues were presented. Future challenges included a more systematic approach, collaboration with other organizations, and knowledge



enhancement.



### How can we link the output of the monitoring programs to the global biodiversity observation systems?

- We need **more systematic approach** to link the data to global database. Monitoring Sites 1000 Coastal Program, the data are uploaded to OBIS although the efforts are **based on voluntary efforts** and thus not sustainable.
- **Cooperation with institutes** related to long-term monitoring and biodiversity
- Regular compilation, sharing and reporting of datasets should be publicly available
- Appropriate institutional arrangements such as a **MOU** may be undertaken to facilitate such a linkage for global biodiversity observation programs.
- **Knowledge of researchers to these existing global biodiversity database should be enhanced.**
- The data we collected were isolated to institutions, but should be open for data sharing through applicable platforms.
- Alignment with the country protocol

Finally, future directions were presented as follows. As next steps, the following issues were announced: improving the response rate, linking with institutional databases, converting data such as EBVs, and clarifying issues. In addition, contributions to the CBD, such as the submission of a white paper, were indicated.



### Next steps

- Increasing the number of responses to the survey
- Ongoing biodiversity monitoring vs the use of data collected by other activities
- Conversion of observed data to EBVs, and to Key Indicators
- Listing up gaps, challenges, opportunities and perspectives.

**Will be discussed in the workshop on Feb 21-22**

### Output

- While paper to send our recommendation to CBD-KMGBF authorities (GEOBON, IPBES and person in charge in each government (like BIODIC in Japan)
- Perspective submitted to a peer-review journal (e.g. Ecological Research)

In the discussion on this issue, it was pointed out that the responses from each country do not necessarily reflect the situation in each country as it is, that it is necessary to be aware of data from international and cross-regional organizations, and that it may be necessary to cover policy aspects by asking government officials to participate in this survey. In response, the co-chairs stated that they were already planning to distribute the survey with policy makers in mind, and that this was intended to strengthen ties with governments other than Japan's Ministry of the Environment.