

In-person meeting for the first time in 3 years!

The summary of APBON workshop and seminar FY 2022, at Fukuoka and online

Hynobius nebulosus on the Ito Campus, Kyushu University



Fourteenth APBON workshop and 15th APBON seminar were held on February 1-2, 2023, in Fukuoka (Glocal Hotel, Itoshima, and Ito campus, Kyushu University) and online. **Twenty-one members from seven countries (in-person) and four members from two countries (online)** gathered, discussed, and exchanged information and experience about biodiversity observation in the Asia Pacific region.

Executive summary

Member activities in six countries and the Association of Southeast Asian Nations were shared. The state of biodiversity observation networks in their countries and the outcome of projects in which their members are involved were introduced and shared.

Participants introduced themselves and exchanged information about their expertise and motivation for research. Afterwards, they used an online whiteboard Miro, to create "Our Ideal World of 2050" that they would like to realize through APBON's activities.

A proposal for using DIAS (Data Integration & Analysis System) for biodiversity data was introduced by the Ministry of Education, Culture, Sports, Science and Technology of Japan. Following this, a breakout group discussion was conducted to frame APBON's observations to respond to the outcome of CBD COP 15*.

* Fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity

Participants visited the Imazu tideland and surrounding rice paddy fields to observe black-faced spoonbills and other species. They then visited the Ito Campus, Kyushu University, to learn about ecosystem restoration efforts during the relocation of the campus and toured the biodiversity conservation zone.

Young researchers from the Mathematical Biology Lab and Ecological Science Lab of Kyushu University gave presentations, while APBON members also introduced their research. Participants were able to learn from each other's perspectives, both in terms of fundamental and policy-oriented research.

DAY 1 Session 1 National Reports

DAY 1 Session 2 Group work: Creating an ideal world

DAY 1 Session 3 Next step

DAY 2 Excursion

DAY 2 Seminar with Young researchers



Visit our website for further information!
<http://www.esabii.biodic.go.jp/ap-bon/index.html>



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Program

Day 1 : February 1 st Venue: Glocal Hotel, Itoshima	
10:00-10:10	Opening Remarks and Introduction to the Program Co-chairs: Dr. Hiroyuki Muraoka (Gifu University/National Institute for Environmental Studies), Dr. Yongyut Trisurat (Kasetsart University), Ms. Runi Anak Sylvester Pungga (Forest Department, Sarawak) Secretariat: Mr. Hideaki Matsumoto, Mr. Ryo Mabuchi (Biodiversity Center of Japan, Ministry of the Environment of Japan)
10:10-12:00	[Session 1] Plenary: Updates and Reporting Activities Moderator: Dr. Hiroyuki Muraoka 1. Cambodia: Dr. Bunthang Touch (Inland Fisheries Research and Development Institute) 2. China - Sino BON: Dr. Xiaojuan Feng (Institute of Botany, Chinese Academy of Sciences) 3. Japan: Dr. Yayoi Takeuchi (National Institute for Environmental Studies, Japan) 4. Malaysia: Ms. Runi Anak Sylvester Pungga 5. Nepal: Mr. Mangal Man Shakya (Wildlife Watch Group) 6. Thailand: Dr. Yongyut Trisurat 7. ASEAN: Mr. Christian Elloran (ASEAN Centre for Biodiversity)
13:00-15:30	[Session 2] Brainstorming and discussion “Ideal World 2050” Moderator: Mimiguri (Ms. Marina Natsukawa, Ms. Miwo Amemiya, and Ms. Fuka Tanaka)
15:50-17:20	[Session 3] Plenary Moderator: Dr. Yongyut Trisurat, Ms. Runi Anak Sylvester Pungga 1. Collaborative project with JapanGEO and AOGEO Mr. Yasuhiro Watanabe (Ministry of Education, Culture, Sports, Science and Technology of Japan) 2. Framing APBON’s observations to respond to the outcome of CBD COP 15. Introduction: Dr. Alice Hughes (Hong Kong University) Showcasing: Dr. Yongyut Trisurat
17:20-17:40	Wrap-up, way forward
Day 2: February 2 nd Venue: Ito Campus, Kyushu University	
9:00-12:00	Field excursion to Kyushu University and Imazu Tidal flat Guided by: Dr. Tetsukazu Yahara (Kyushu Open University) and Dr. Yuichi Kano (Kyushu University)
14:00-16:15	APBON Webinar Moderator: Dr. Yayoi Takeuchi Session 1: Research presentations of Kyushu University’s Mathematical Biology Laboratory and Ecological Science Laboratory students 1. Mr. Wataru Nakamizo 2. Mr. Shogo Noguchi 3. Mr. Sou Tomimoto 4. Ms. Chihiro Myotoishi 5. Mr. Takeru Kodama Session 2: Introduction from APBON 1. Dr. Sunita Chaudhary (International Centre for Integrated Mountain Development) 2. Dr. Alice Hughes Q&A for Sessions 1 & 2



Opening remarks by Mr. Mabuchi



Field excursion

Participant insights

Results from questionnaire

What are your takeaways from the event?

Asia Pacific region is rich in biodiversity, but various threats necessitate regional-scale cooperation to ensure the conservation and sustainable management of biodiversity.



To achieve the Kunming-Montreal Global Biodiversity Framework targets, regional collaboration and cooperation for data generation and sharing is required.

We have an excellent group, but we need to coordinate strategically to ensure progress going forward.



It was a welcome experience to reunite with APBON members after the pandemic. I learned a lot during the meeting, especially through the presentations and updates from APBON nodes.

Empowering local communities is important for nature-positive actions.

Personally, I found it meaningful to listen to students' presentations and exchange opinions, although I would like to know how interested foreign members of APBON were in these projects.

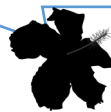


What would you like to do within 1-2 years with APBON members, considering the takeaways from the event?

Establish genuine working groups to collate data for the AP region to support the development of NBSAPs*.

* National Biodiversity Strategies and Action Plans

Joint paper and knowledge sharing among APBON Members.



An international conference is scheduled in Malaysia, and we would like to hold a collaborative session there. We would also like to exchange information with them in future surveys.

I would like more opportunities for informal conversation as I could talk to members during coffee breaks, lunch, and excursions during the workshop.

Joint research proposal on specific biodiversity targets such as OECMs* in Southeast Asia

* Other effective area-based conservation measures

Restoration efforts at Kyushu University are remarkable and can be replicated elsewhere in the region

Capacity development program for local communities.

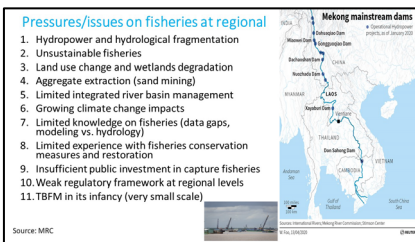
Provide guidance and technical support to further enhance the visibility and engagement of APBON in the international arena



A variety of information on biodiversity status, conservation and monitoring efforts, and related policies from six countries (Cambodia, China, Japan, Malaysia, Nepal, and Thailand) and one region (ASEAN) was shared.



1. Cambodia : Dr. Bunthang Touch, Inland Fisheries Research and Development Institute (IFReDI)



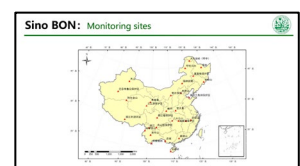
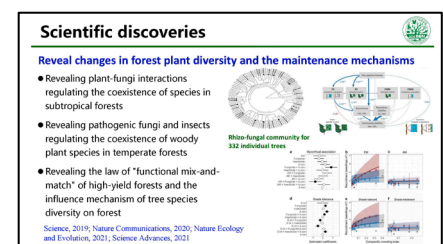
Freshwater fisheries values in Cambodia and the surrounding region, pressures on freshwater ecosystems and related issues, and the status of long-term monitoring were shared.

The lower Mekong basin is the world's largest inland fishery, home to nearly 1,200 fish species. Fish accounts for 76% - 81% of the total animal protein intake of the Cambodian population. However, the pressures on/issues concerning fisheries in the region are serious and include hydrological fragmentation due to hydropower projects, unsustainable fishing methods, and land use change. Cambodia, Lao PDR, Thailand, and Vietnam produce long-term monitoring data for the **Core River Monitoring Network**, a long-term monitoring project/network in this region.

2. China – Sino BON : Dr. Xiaojuan Feng, Institute of Botany, Chinese Academy of Sciences

Sino BON is a network consisting of 10 sub-networks and 19 institutions. **A combination of manual observation and advanced technologies**, such as satellite tracking (birds), infrared camera (mammals & birds), LiDAR (vegetation), ID tracking (amphibia), and tower crane (forest canopy), are used for biodiversity monitoring. **Ten Monitoring specifications, covering traditional manual observation and advanced technologies, will be published in 2023.**

Some **scientific discoveries resulting from the observation**, such as "Reveal changes in forest plant diversity and the maintenance mechanisms," were introduced.



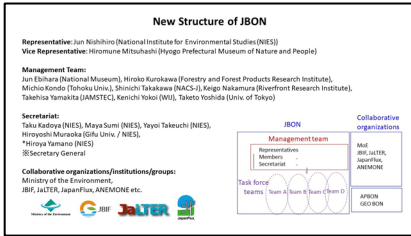


3. Japan : Dr. Yayoi Takeuchi,

National Institute for Environmental Studies

Restart of JBON in 2022: JBON was established in 2009 and engaged in networking activities such as workshops and the exchange of information through mailing lists. **It had not been active since 2014 but was revived in 2022**, mainly by members of the National Institute for Environmental Studies. **Growing demand for biodiversity information, the development of cutting-edge technologies for biodiversity observation, and the increasing significance of conventional surveys led to the revival of JBON.**

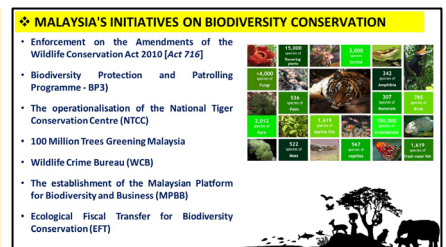
JBON members are currently discussing its work plan and organizational concerns to resume operations this year.



4. Malaysia : Ms. Runi Anak Sylvester Punga,

Forest Department, Sarawak

The **National Policy on Biological Diversity 2016-2025 will be revised** in line with the Kunming–Montreal Global Biodiversity Framework. In 2022, Malaysia’s initiatives on biodiversity conservation made considerable progress in certain areas. For example, **around 900 wildlife rangers were appointed** under the Biodiversity Protection and Patrolling Program, and **more than half of them were from Indigenous People and Local Communities**. The **Malaysian Platform for Biodiversity and Business was established**, and at least 10 companies from agriculture, oil and gas, and shipping industries support the role of businesses in global biodiversity initiatives.



- Issues**
- The use of biodiversity monitoring/observation/evaluation mechanism for economic growth & biodiversity conservation
 - Exploring new revenue (eg., carbon trading /green economy or other resources)
 - Effective partnership in project implementation & knowledge transfer
 - Prioritize research & Sustainable funding

5. Nepal : Mr. Mangal Man Shakya,

Wildlife Watch Group



Biodiversity observation activities related to conservation actions in Nepal were shared. For example, a **case study of the Environmental Impact Assessment of a highway** and Supreme Court precedents on **construction projects along conservation areas** were introduced.

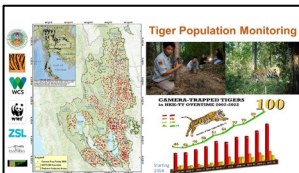
Chitwan National Park is home to the world’s second-largest population of greater one-horned rhinos (*Rhinoceros unicornis*). In fact, **Nepal received international accolades for recording zero poaching** of rhinos in 2011, 2014, 2016, 2018, 2019, and 2020.





6. Thailand : Dr. Yongyut Trisurat,

Kasetsart University



Various monitoring sites and networks, such as Long-term Ecological Research Permanent Plots and the Thai Forest Ecological Research Network, exist in Thailand. Plots are located in diversified areas, including Biosphere Reserves and World Heritage sites. At species level, for example, Tiger population monitoring has been carried out with the aid of NGOs and other organizations, and the estimated population increased by approximately 1.5 times from 2010 to 2022.

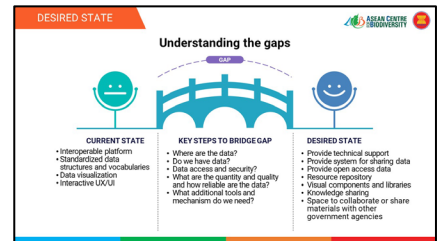
The estimation of implementing and achieving the 30 by 30 target in Thailand have carried out from various monitoring data.

7. ASEAN : Mr. Christian Elloran,

ASEAN Centre for Biodiversity (ACB)

The status, conservation and monitoring activities of marine biodiversity in the ASEAN region were introduced. For example, ASEAN Heritage Parks and ASEAN Flyway Networks are unique transboundary initiatives within the region. ACB has a partnership with OBIS (Ocean Biodiversity Information System), and 34 regional nodes exist within the Southeast Asia SEAOBIS.

ASEAN Biodiversity Dashboard is an online platform for visualizing trends and geographic variation in biodiversity indicators. It acts as a source of biodiversity data and provides capacity-building tools to aid conservation planning, monitoring, and decision-making.



Mr. Christian Elloran



Ms. Runi Anak Sylvester Pungga

DAY 1 Afternoon 1

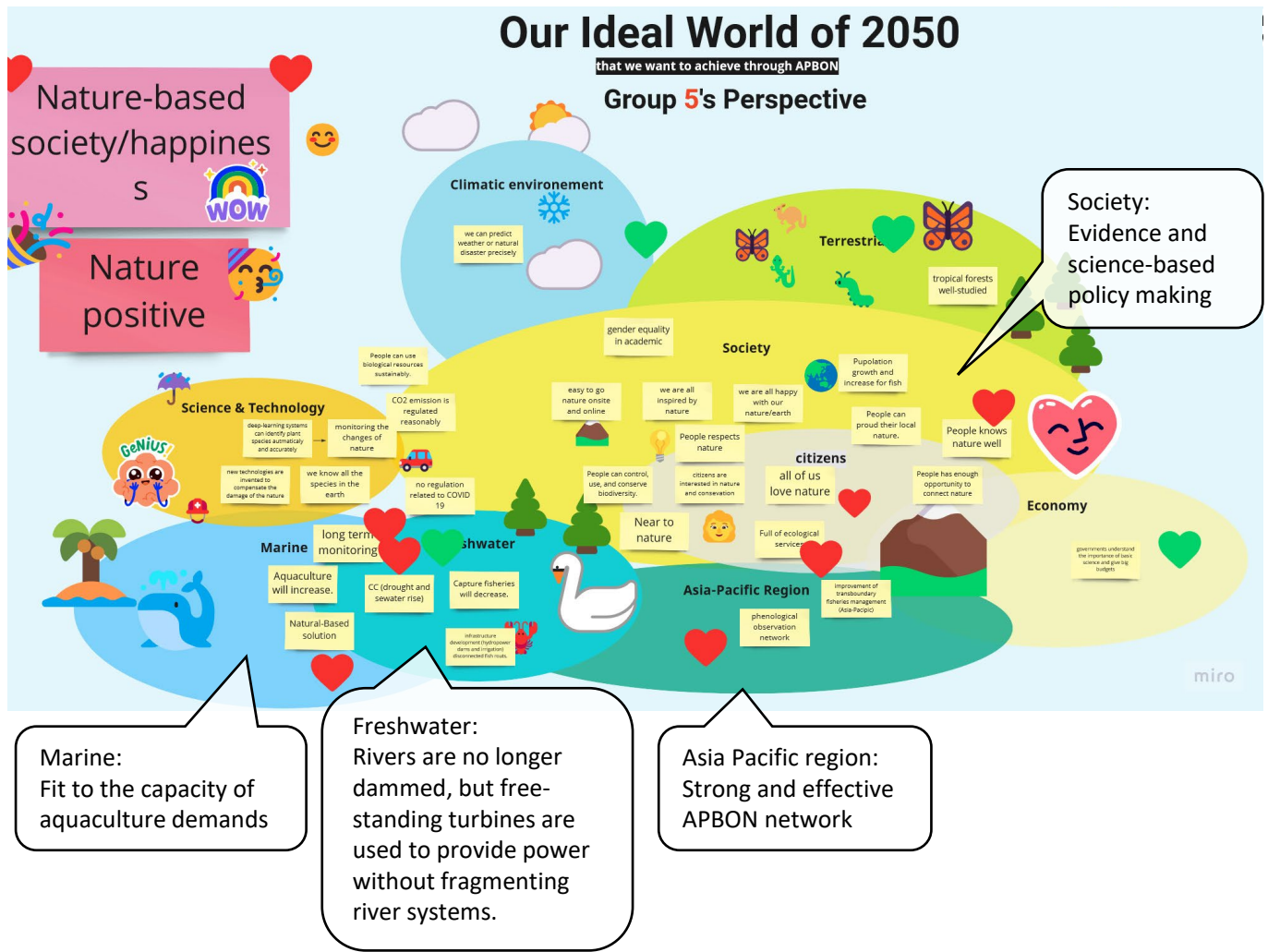


Session 2 : Group work for brainstorming and discussion

Through APBON activities we hope to achieve “The Ideal World of 2050.” Its framework was created by focusing on participants’ areas of expertise and their motivation for research. Session 2 was organized and facilitated by professional facilitators “Mimiguri” and used an online whiteboard (Miro) to provide the same experience to online as well as onsite participants.

Fig 1: Group 5’s map of “Our Ideal World of 2050”

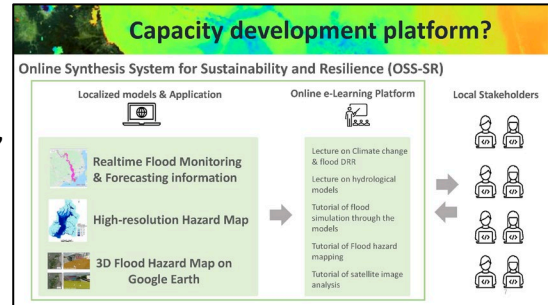
* The comments on some idea balloons are taken from different groups’ maps.





1. Collaborative project with Japan-GEO and AOGEO.

A capacity development program using DIAS (Data Integration & Analysis System) was introduced by the Japan-GEO office in MEXT* Japan. **DIAS provides multiple Earth observation datasets, climate change prediction data, and applications through its online platform.** These data can be evaluated, visualized and fed to a localized capacity development platform.



Biodiversity next ?

- E-learning **enables local stakeholders to utilize the biodiversity extent maps** for local conservation policy-making and practices as well as urban planning.
- Local stakeholders realize the importance of collating better and more representative data.
- We provide **a series of e-learning courses to empower local stakeholders'** biodiversity monitoring capacity

For example, **Online Synthesis System for Sustainability and Resilience (OSS-SR)** is a system that integrates real-time flood monitoring and forecasting information and hazard maps. These models/applications are used to make **online e-learning platforms** (e.g., lectures on climate change & flood DRR**) for stakeholders. **This system can be applied in the biodiversity realm through members of APBON.**

* Ministry of Education, Culture, Sports, Science and Technology of Japan

**Disaster Risk Reduction

2. Framing APBON's observations to respond to the outcome of CBD COP 15.

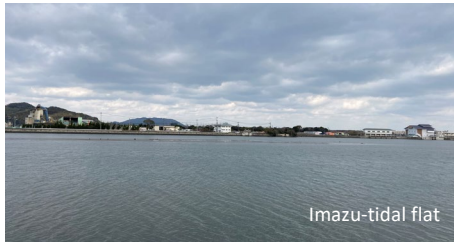
The outline of the Kunming-Montreal Global Biodiversity Framework was explained by Dr. Hughes, and Thailand's case study, which identified focus areas to reach the 30 by 30 target, was introduced by Dr. Trisurat. Participants were then divided into four groups according to the working groups and method of participation. The main questions and some responses from the Marine working group as an example, are as follows;

1. What data would be needed to identify areas of protection?
 - EBSAs (Ecologically or Biologically Significant Marine Areas) will be one way of integrating different aspects of diversity.
2. What are the major barriers to collation of data and implementation?
 - Policy, conflict with fisheries
 - Utilization of research information, for prediction and local management, is also necessary.
3. How can we access the data?
 - Motivation (human and financial resources) are required. Blue Carbon, TNFD, and NBSAPs could offer the ideal opportunity.
 - Data sharing mechanisms and feedback to data providers and managers are also important.
4. What other mechanisms would be needed?
 - Offshore and deep-sea areas will need more support.

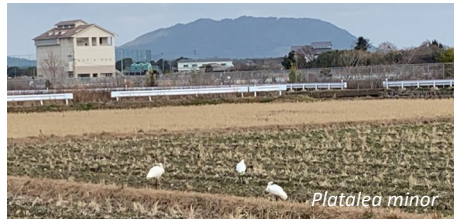




Imazu-tidal flat and Black-faced Spoonbill



Imazu-tidal flat



Platalea minor

Participants visited the **Imazu-tidal flat and rice paddy fields around the wetland**. Animals and plants, including the **Black-faced Spoonbill (*Platalea minor*)** and Common Shelduck (*Tadorna tadorna*), were observed.

The Black-faced Spoonbill is found in Eastern Asia, and few of them winter in Japan. It is classified EN in the IUCN Red List, but regular monitoring via the International Black-faced Spoonbill Census has indicated a recovery. (IUCN red list 2022-23)

Biodiversity conservation zone of Ito Campus, Kyushu University

Participants then visited the **biodiversity conservation zone of Ito Campus, Kyushu University**, and learned about the **ecosystem restoration project**. The Ito Campus was built to integrate two campuses and one farm into one space at the current location (Itoshima City). **During the relocation, zoning, transplanting, and other conservation efforts were made.**



Bufo japonicus



Restored area



Biodiversity conservation zone



Watershed

The campus is around 280 hectares, and **about a third of the campus is designated as a conservation zone**. For better connectivity, green corridors have been made for small mammals. **Watersheds located in the center of the campus are home to a variety of amphibians** and other species. Invasive species eradication (e.g., traps for raccoons, dogs), monitoring with camera traps, and other **conservation activities are also conducted on campus.**



Imazu-tidal flat



Imazu-tidal flat



Watershed



Dr. Tetsukazu Yahara



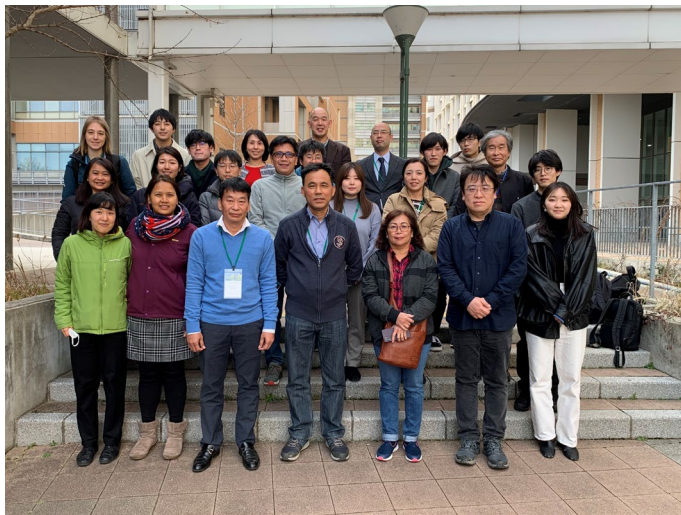
Dr. Yuichi Kano



Young researchers from Kyushu University's Mathematical Biology Laboratory and Ecological Science Laboratory were invited to the 15th APBON webinar. **Both young researchers and APBON members gave presentations and exchanged information.**



Q and A session



Lab members study **diverse aspects of biological systems using mathematical and computational approaches**. The topics of the presentation mainly focused on the **basic research on insects and plants**, for example, “Prey compositions and predatory behavior of Japanese tiny ant-eating spiders (by Mr. Noguchi),” “The calling song of *Meimuna opalifera*; difference of the functions between the former and the latter part of the song (by Mr. Kodama)”. **All five presentations were engaging and heightened enthusiasm, and multiple questions were raised by APBON members.**

Two presentations were made by APBON members Dr. Chaudhary and Dr. Hughes. The first presentation was on **the impact of the changing cryosphere on biodiversity and ecosystem services in the Langtang National Park, Himalaya**. For example, changes in the cryosphere affect **water availability in drylands and lowlands at low altitudes**. **The impact of climate change and earthquakes on ecosystems**, including vegetation, mammals, birds, and the human-nature conflict were introduced.



Dr. Sumita Chaudhary



Dr. Aircé Hughes

The second presentation was about **frameworks to identify and protect ecosystem services**. Some related research was introduced, for example, **revealing ecological and conservation redlines by spatial analysis**. Mapping ecosystem services and understanding drivers can influence how we manage ecosystems. **Converting data into policy is important**, and analysis can provide a basis for targeted intervention and management.

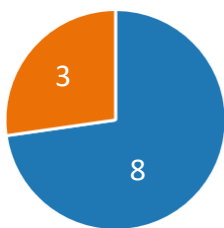
For further improvement

The results of the questionnaire

• Execution period: Feb 16th to Mar 8th, 2023, Response rate 44% (11 answered out of 25 participants)

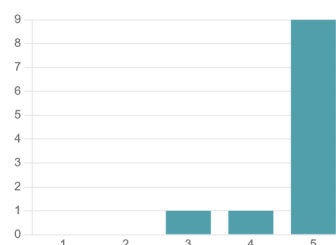
1. How did you attend the event?

- Onsite
- Online



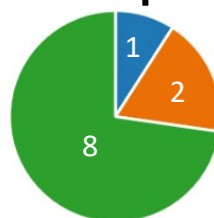
2. How would you rate the event?

Average
4.73



3. How many times have you attended the APBON workshop?

- First time: 1
- Two or three times: 2
- More than three times: 8



4. How would you rate the programs below?

- Very dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very satisfied
- absent

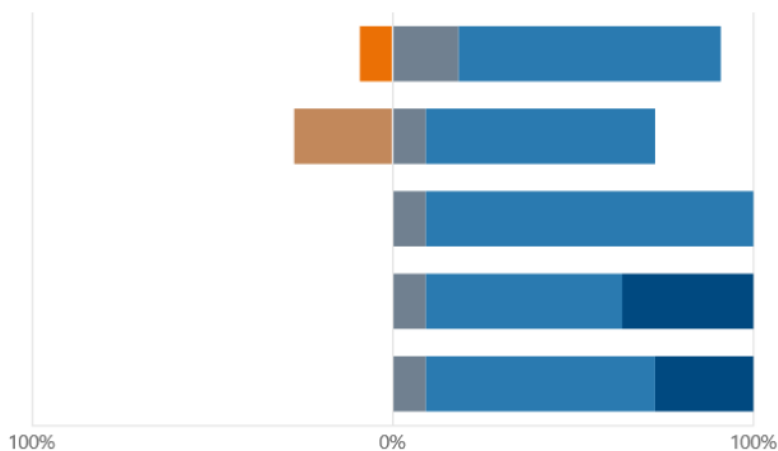
Day 1 Morning : Session 1 (update and reporting from members)

Day 1 Afternoon : Session 2 (organized by professional facilitators : mimiguri)

Day 1 Afternoon : Session 3 (group work by working groups)

Day 2 Morning : Excursion

Day 2 Afternoon : webinar with young researchers



Comments

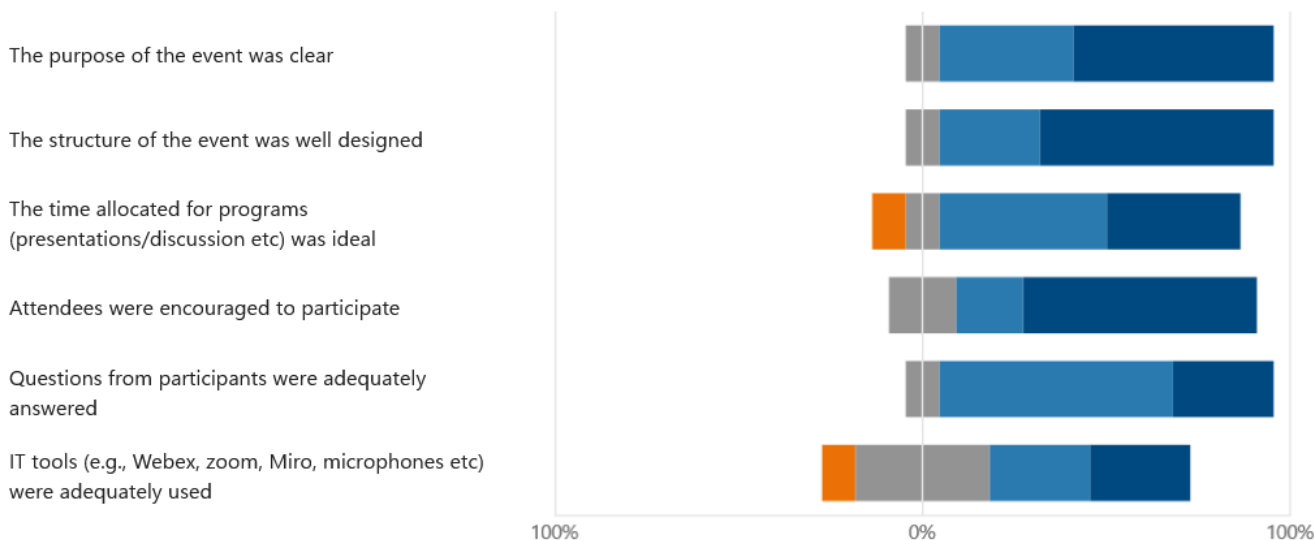
- I think the program was great.
- Thank you so much APBON Secretariat and Ministry of Environment, Japan, for supporting and hosting the program. More action-oriented activities in the coming 1-2 years.
- Training by Mimiguri is too short to comprehend. One suggestion - accommodation and workshop should be at the same venue.
- Encourage onsite participation for all delegates
- I thought the excursions could have been explained better at the beginning. While the work using online web tools was interesting, many people took time to get comfortable using them.

For further improvement

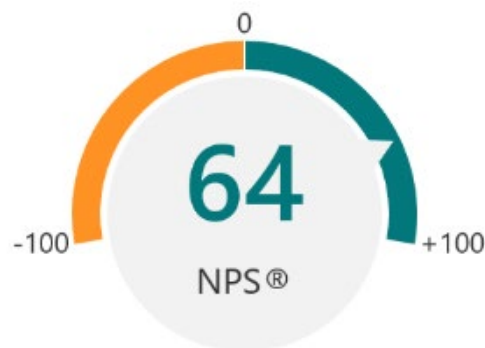
The results of the questionnaire

5. How would you rate the points below?

Very poor Poor Fair Good Excellent



6. Considering your overall experience, how likely are you to recommend this event to your friends or colleagues?



7. Please let us know if you are interested in participating in/organizing any topic, structure, or program of the APBON workshop.

- More time on detailed planning and prioritization would have been useful. The Miro tools were fun, but I think the time may have been better used for concrete planning
- Biodiversity data management
- Local topics on biodiversity (focusing on each country); new NBSAPs; EBV(Essential Biodiversity Variables)
- Sharing success stories of biodiversity observation at different levels
- Communication with climate change researcher
- Detailed presentations on how the studies were conducted, methods, and the usefulness of such studies to the community
- Real cases of nature-based solution
- It would be interesting to have a questionnaire that compares countries.