

March 3-5 2021

13th AOGEO
SYMPOSIUM

ONLINE

AOGEO



AOGEO Task Group 2: Asia-Pacific Biodiversity Observation Network (APBON)

Co-chairs

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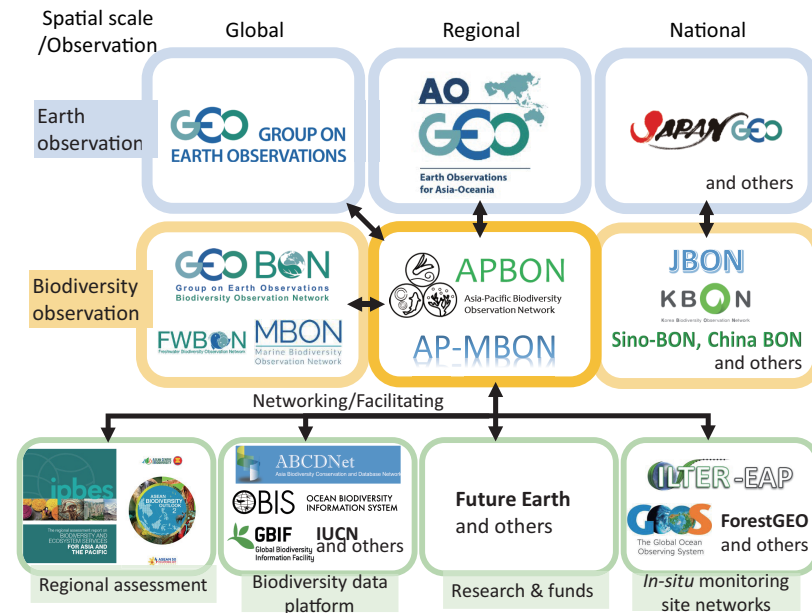
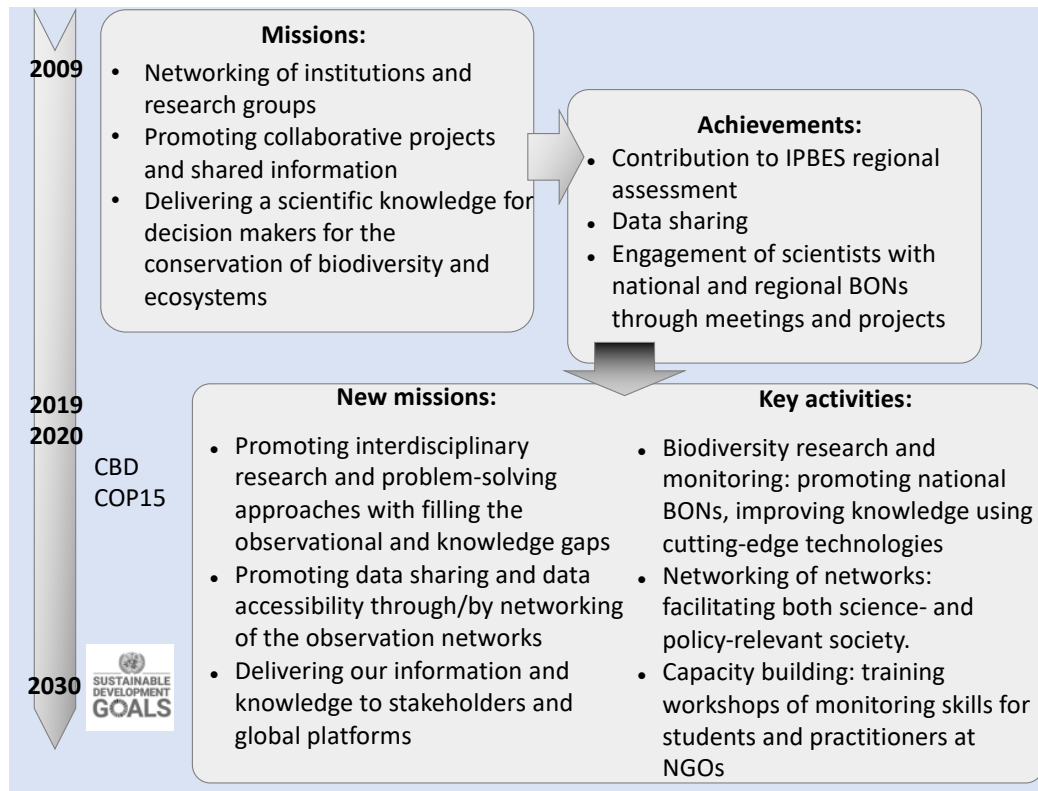


APBON Strategic Plan toward 2030

Strategy:

1. Biodiversity research and monitoring
2. Networking of networks/communities
3. Capacity building

Broader collaboration and engagement at regional and global scales, by multidisciplinary approach to respond to the national, regional and global needs.



- (1) Developing national BONs and networking them in the region to contribute to CBD Aichi Biodiversity Targets and post 2020 Global Biodiversity Framework,
- (2) Filling observational and knowledge gaps for biodiversity status and trends to contribute to IPBES assessments,
- (3) Producing data and knowledge to address the issues particularly related to biodiversity and ecosystem sustainability by coordinated activities with GEO and AOGEO,
- (4) Contributing to achievements of SDGs by providing adequate and defensible biodiversity data that help developing policy for conservation and sustainable use of biodiversity,
- (5) Learning and sharing the challenges of biodiversity issues under COVID-19 pandemic and on-going climate change.

I. Development of BON and its contributions to society

- The CBD Post 2020 Global Biodiversity Framework (Basile van Havre, CBD)
- GEO BON's net plans (Andrew Gonzalez, GEO BON)
- Progress on Aichi Targets in Hindu Kush Himalaya (Sunita Chaudhary, ICIMOD)
- Status of Palau's Coral Reefs (Yimnang Golbuu, Palau International Coral Reef Center)

II. Updates of BONs in the region

ASEAN Centre for Biodiversity; SinoBON; Indonesia-BON; JBON; K-BON; Malaysia; Nepal-BON; Thailand-BON

III. Working Groups

Terrestrial, Freshwater, Marine AP-MBON

IV. Engagement, networking and actions for 2021

- Introduction to Key Biodiversity Areas (Andrew Plumptre, KBA)
- Contributions to AOGEO
- Activity plans 2021

43 participants from 13 countries

(Japan, Cambodia, Canada, China, Indonesia, Korea, Malaysia, Nepal, Palau, Philippines, Thailand, UK, Vietnam)



1. Emerging biodiversity issues under the COVID-19 pandemic
2. Master site plan for long-term and multidisciplinary observations of biodiversity and ecosystem functions

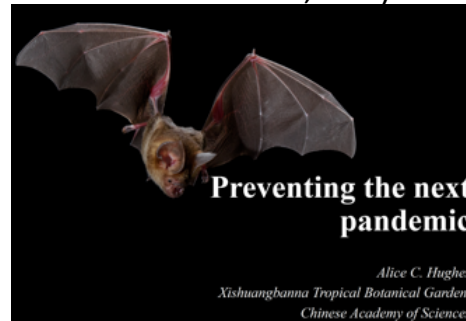
Yayoi Takeuchi (NIES, Japan)

Pandemics as a biodiversity issue

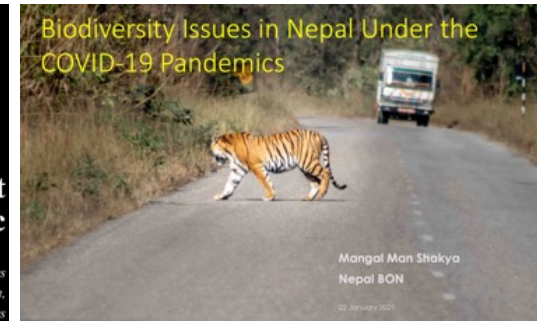
- Causes of pandemics
 - High species diversity of wildlife -- zoonotic virus reservoirs
 - Increasing contact with wildlife and livestock – e.g, landuse change to ranches, wildlife exploitation, global trade, global transportation
 - >make zoonotic diseases more likely
 - Land exposure due to climate change and environmental degradation
- Impacts of pandemics and lockdown to biodiversity
 - Positive impacts
 - Negative impacts



Alice Hughes
(Xishuangbanna Tropical
Botanical Garden, CAS)



Mangal Man Shakya
(Nepal BON)



Toward “a society in harmony with nature” after pandemics

- Preventing future pandemics
 - How we reduce/mitigate the risk of zoonotic disease
 - How we conserve habitat and regulate unsafe wildlife trade practices?
- Insights from pandemic society
 - Positive impact on biodiversity
 - Recognizing impact of tourism
 - Negative impact on biodiversity
 - Pollution -- due to increasing wastes
 - Illegal tree cutting, poaching -- due to lack of management, poverty

Regulation and
Conservation

COVID-19 recovery can benefit biodiversity?

Freshwater Working Group

1. Let's make 3D models of fish specimen by the photogrammy
2. Necessity of reference, voucher specimen and parataxonomist for biodiversity monitoring
3. Diversity and ecology of fish in the Thai-Mekong Region with the impact of Modernized in LMB region

Yuichi Kano
(Kyusyu Univ. Japan)

Chaiwut Grudpan
(Ubon Ratchathani University, Thailand)

Kenzo Utsugi (INTEM Consulting Inc., Japan)



22 January 2021

Asia Pacific Biodiversity Observation Network

Freshwater group session

“Diversity and ecology of fish in the Thailand-Mekong With the impact of Modernized in LMB region.”

Dr. Chaiwut GRUDPAN

Fisheries, Agriculture, Ubon Ratchathani University

Necessity of reference, voucher specimen and parataxonomist for Biodiversity Monitoring in Mainland Southeast Asia

2021 January 22
INTEM Consulting Inc.
Kenzo Utsugi

Fishes of Mainland Southeast Asia

Explore the freshwater fish diversity in the mainland Southeast Asia



ffish.asia

Scientific name: *Cyprichthys siniperla*

Local name: 暹羅魚 (Siamese fish)

Common name: 暹羅魚 (Siamese fish)

Conservation status: Least Concern (LC)

Geographic distribution: Mainland Southeast Asia

See also:

- Kano et al. (2015) An online database on freshwater fish diversity and distribution in Mainland Southeast Asia
- Watanabe et al. (2015) GEOBAP: a database of genetic diversity for Japanese freshwater fishes. *Integrative Research*, 57: 107-109.
- Kano et al. (2016) Impact of Dams and Global Warming on Fish Biodiversity in the Indo-Burma Hotspot. *PLoS ONE*, 11: e0151151

http://ffish.asia/

Conclusion

1. Thai-Mekong is the hot spot biodiversity in fishes more than 310 species founded
2. Thai-Mekong shared effects of impact with neighboring countries that need more transboundary collaboration and co-management .
3. Land used changing and water management is the highest pressure to natural Resources in Thai-Mekong.
4. Identification practices for diversity and ecosystem should be concerned for the regional researchers who have been working on routine monitoring ecological data .

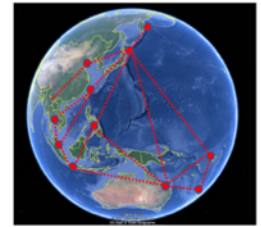


Marine Working Group (AP-MBON)

1. Organization of AP-MBON (APBON Marine Group) membership and committee
2. Introduction of ongoing research projects (endorsed by AP-MBON)
3. Data Management (in relation to OBIS)
4. Contribution to GEO, AOGEO, GEOBON, MBON, UN Decade of Ocean Sciences, etc.
5. Capacity building
6. Outreach activities

Capacity building

- Networking International Field Courses for graduate and undergraduate students



International Marine Courses in Akkeshi
 Course II (Online): July 19-21, 2021
 Course III (Onsite): July 25-29, 2021
 Application for overseas students will start in February 1st.

<https://hokkaidosummerinstitute.oia.hokudai.ac.jp/>



New projects

Masahiro Nakaoka

JSPS Kakenhi Project

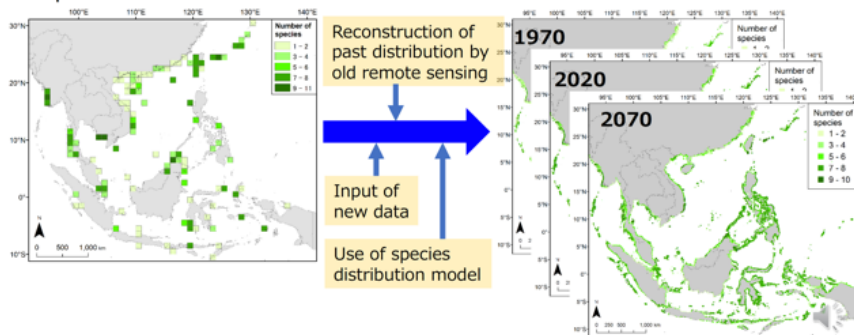
(Hokkaido Univ., Japan)

Evaluation of Marine Biodiversity in Coastal Areas of SE Asia:
 Estimating Past Trajectory, Current Status and Future Forecast

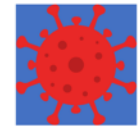
Masahiro Nakaoka, Takehisa Yamakita, Rempei Suwa, Kyosuke Momota, Anchana Prathep, Jillian Ooi, Sahadev Sharma, Siti Yaakub, Rohani Ambo Rappe, Analuddin, Yasmin Primavera, Venus Leoparadas

Current data on seagrass species occurrence

Estimation of past, current future distribution



Impacts of COVID-19 pandemics on marine biodiversity



Impacts in both ways (either positive/negative) through changes in human activities

Fishing the seabed during low tide at Benoa Bay, Bali, last month. Photos: Lucas for The New York Times

APBON's contribution to GEO Engagement Priorities

APBON provides adequate, long-term and defensible biodiversity data that help developing policy for conservation and sustainable use of biodiversity by developing the national and regional networks that align with the global networks to fill observational and knowledge gaps.

APBON concerns about the pandemic of zoonotic diseases as a biodiversity issue because of weak resilience of natural system, the increasing contact with wildlife and livestock through land-use change, wildlife exploitation, global transportation, and land exposure. Human activities are responsible for these threats and therefore the regional cooperation is essential to address this cross-cutting issue for healthy ecosystems and sustainable society.

APBON's work plan 2021 and beyond

APBON responds to the following new needs to the biodiversity observations:

- (1) developing national BONs and networking them in the region to contribute to CBD Aichi Biodiversity Targets and post 2020 Global Biodiversity Framework,
- (2) filling observational and knowledge gaps for biodiversity status and trends to contribute to IPBES assessments,
- (3) producing data and knowledge to address the issues particularly related to biodiversity and ecosystem sustainability by coordinated activities with GEO and AOGEO,
- (4) contributing to achievements of SDGs (11, 13, 14, 15) by providing adequate, long-term, site-based and defensible biodiversity data that help developing policy for conservation and sustainable use of biodiversity, and
- (5) identifying the challenges of biodiversity and related cross-cutting issues under COVID-19 pandemic and on-going climate and societal changes.