

Summary of APBON's plan for 2023–2025

APBON renewed its work plan in 2021 and has continued working on it. Despite the COVID 19 pandemic, it facilitated sharing knowledge and the education of researchers and stakeholders through online workshops, webinars and publications.

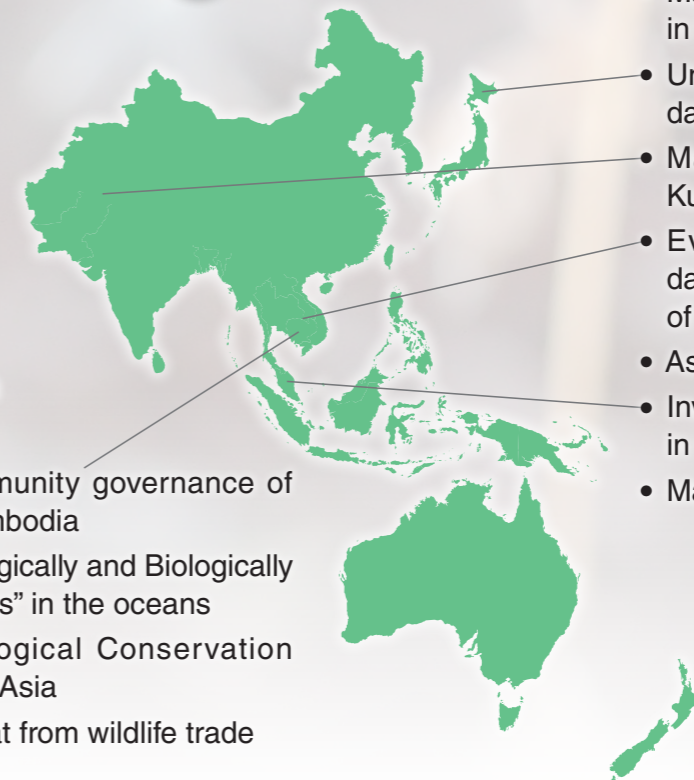
Strengthening observations and proceeding data sharing	Stakeholder engagement and capacity development
<ul style="list-style-type: none"> ■ Continuing observations of biodiversity and ecosystems for assessing status and changes under environmental changes • Phenology and the carbon cycle as the interface of biodiversity and climate change issues • eDNA and high-throughput DNA sequencing for species identification and monitoring ■ Scaling-up of biodiversity observation is key • High-resolution satellite data are key for biodiversity indicators and metrics • Verification and implementation of Essential Biodiversity Variables are key for continuous observations • The Master site concept will enable multidisciplinary and multiplatform observations 	<ul style="list-style-type: none"> • Governments, the private sector, citizens, and youth networks from the region and beyond APBON are expected • Development of networks within countries (National BONs), regions and globally • Encouragement and support of education/training/meeting/workshop opportunities • Translating and digitizing data/knowledge in local languages into English to preserve historical local data and comprehensive and fair assessments and conservation of biodiversity and Nature's Contributions to People (NCP) (e.g., resources and cultures) in the Asia-Oceania region
Contribution to national, regional and global efforts	
<ul style="list-style-type: none"> • Sustainable Development Goals (6, 12, 13, 14, 15) • CBD Post-2020 Global Biodiversity Framework • Taskforce on Nature-related Financial Disclosures (TNFD) • Nature-Based Solutions for climate change and biodiversity conservation 	



APBON Highlights 2022

APBON (Asia-Pacific Biodiversity Observation Network, established 2009) is a **network for observing and assessing biodiversity and a platform for engaging with scientific policies**. Our mission is to increase the exchange of knowledge and expertise between institutions and researchers concerning biodiversity and scientific research in the Asia Pacific region, thereby contributing to evidence-based decision making and policymaking.

APBON at a glance



Monitoring biodiversity

- Mapping tropical tree species and changes in forest cover
- Unprecedented algal blooms and fisheries damage in Hokkaido (2021)
- Mapping protected areas in the Hindu Kush Himalaya
- Evaluating the impacts of hydropower dams and climate change on the diversity of fish species in the Mekong
- Assessing threat and priorities regionwide
- Investigating African swine fever infections in wild boars in Malaysia (2022)
- Mapping bats and zoonoses

Conservation

- OECMs/KBAs
- Improved community governance of fisheries in Cambodia
- Mapping “Ecologically and Biologically Significant Areas” in the oceans
- Mapping Ecological Conservation redlines across Asia
- Assessing threat from wildlife trade

Mobilizing biodiversity data

- Descriptions of plant species in Southeast Asia
- Active GBIF BIFA projects
- ffishAsia / floraZia

Networking and facilitating

Assessments

- IPBES regional assessment
- ASEAN Biodiversity Outlook
- National Biodiversity Outlooks

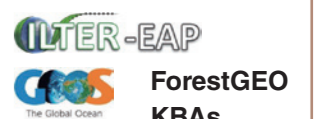
Biodiversity data platform



Research & funds

Future Earth

Monitoring networks



APBON Secretariat
Biodiversity Center of Japan, Nature Conservation Bureau, Ministry of the Environment

Date of issue: Dec 1, 2022

Contact: Biodiversity Center of Japan, Nature Conservation Bureau, Ministry of the Environment 5597-1, Kenmarubi, Kamiyoshida, Fujiyoshida City, Yamanashi Prefecture 403-0005, JAPAN

Email: biodic_webmaster@env.go.jp
 Tel: +81-555-72-6031
 Fax: +81-555-72-6035
 DOI: <http://doi.org/10.34462/00000074>



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

APBON is supported by and cooperates with



APBON Activity Highlights and Findings 2020-2022

Activity Highlights

Findings and Challenges

Terrestrial

- **Phenology** research on forests in East and Southeast Asia^{*1 *2}
- **Satellite remote sensing of biodiversity**
 - Tropical forests and tree flowering
 - Himawari AHI satellite is useful for phenology observations
 - Mapping forest fragmentation / connectivity by satellite imagery for assessing integrity of forested landscapes in Himalayan regions in India^{*3}
- **Impact assessment of climate change** on biodiversity and species distribution
- **Knowledge for biodiversity conservation** in cityscapes and regions
- SATREPS project for biodiversity conservation in Sarawak, Malaysia^{*4}
- **Mapping protected areas** in the Hindu Kush Himalaya^{*5}
- Collections of herbarium specimens (flora and fauna) in Sarawak
- **Systematic observation, data center, and platform** in SinoBON
- **New DNA sequencing technique** for the evaluation of species and genetic diversity^{*6}

- **Nature-Based Solutions** to global climate change mitigation and adaptation
- Data and knowledge needs to avoid a possible tradeoff in infrastructure for carbon neutrality and biodiversity (e.g., solar energy systems)
- **Integrity of forested landscapes is key** for biodiversity conservation and ecosystem functions and services
- **Valuable ecosystems**, such as peatlands, rangelands, and wetlands, are degrading because of the climate crisis, forgotten and exploited systems like karsts also need attention. Assessments of climate change induced impacts on biodiversity are urgently needed
- **More research** needs to be carried out on carbon, issues **relevant to climate change, and addressing the SDGs**
- **'Master site' concept** to connect in situ and satellite observations of biodiversity and ecosystem functions (e.g., the carbon cycle) and scaling up to a broader spatial scale

Freshwater

- **3D model of various organisms** for the online specimen database (ffishAsia / floraZia)^{*7}
- "Mekong integrated water resources management project"—**Improved community fishery governance in Cambodia**; illegal fishing and threats to the resource; socioeconomic and food security benefits; resource management; gender and ethnic minorities

- Understanding the **implications of water infrastructure development and climate change on fish yields** and welfare values in Cambodia
- Impacts of illegal fishing, environmental change, population growth, and hydropower dams on fish biodiversity in Cambodia

Coast and Marine

- Established AP-MBON
- Hosting a series of online workshops and sessions, including symposium on healthy oceans as **UN Decade of Marine Science**^{*8 *9}
- Review and case study paper on genetic analysis of **important marine areas (EBSAs)** for coral around Japan^{*10}
- Developing and applying innovative new technologies on marine biodiversity observation in Asia-Pacific Region, such as **remote sensing and deep learning** techniques and environmental DNA^{*11 *12}

- Projects in response to the **UN Decade of Marine Science** (deep sea, **seagrass** and **mangrove mapping, and pole to pole biodiversity**)
- Elucidating current distribution of **seagrass beds in SE Asia, their temporal changes and protection status**^{*13}
- Networking of Harmful Algal Bloom research in Asia-Pacific Region
- Promotion of **Social-Ecological System** study such as understanding importance of Blue Carbon ecosystems to local people^{*14}

Visit our website for references!

