WG2: Asia-Pacific Biodiversity Observation Network (APBON)

Achievements and lessons learned from APBON Activities: **Toward developing a broader network of biodiversity and ecosystem observations**

Recommendations from APBON 08

- Increase Access to Data
- Promote Data Sharing
- Network observation sites
- Monitor Changes in Biodiversity and Ecosystems
- APBON Publications
- Support to Global Platforms
- Fill gaps in data availability
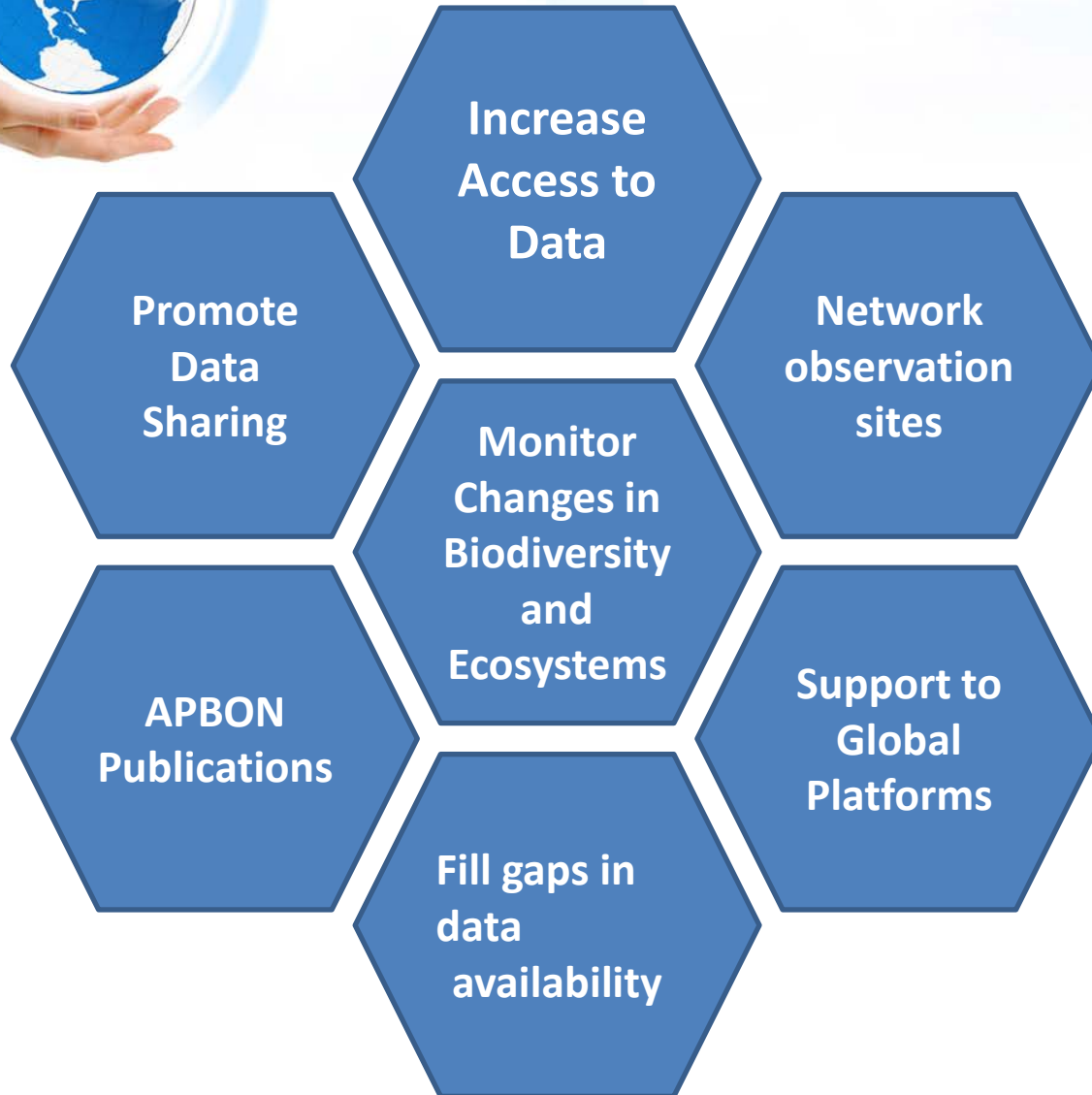
Progress and recommendations from which to build on

1. Some BONs are operational at the national and sub-regional levels but there is need to organize more National BONs and organize a network of BONs facilitated by GEOBON

2. Training courses available through GBIF as funded by BIFA; need to expand to other areas (other parts of Asia and Pacific)

3. Threats to biodiversity identified
   - Drivers of Biodiversity Loss
   - Drivers of Mangrove Loss
   - Drivers of wetland loss
   - Anthropogenic actions that hamper achievement of SDGs identified

4. Biodiversity databases established through various accessible platforms such as GBIF, ABCDNET, National CHMs and the ASEAN CHM. Related databases specific to certain taxa have also been established

Progress and recommendations from which to build on

4. Data shared have been used to:

Monitor amphibians, reptiles, inland water fish, insects, soil animal and microbes aiversity, and to conduct long term monitoring such as **ILTER**
Contribute to global data holdings including such as CForBio
Increase data paper publications
Populate databases, contribute to regional platforms such as the ABCDNet, GBIF and prepare distribution maps
Analyze projects that answer specific questions
Conduct surveys and **Prepare assessments** (eg regional mangrove assessment)
Develop models to predict CC impacts, DRR, inform decision making and prepare ecosystem service evaluation
Develop policies and guidelines

5. Technology is available
Large coverage high resolution observation technology
Forest Crane, Drones and LIDAR that facilitate assessments in various ecosystems

APBON and Biodiversity Observations

1. Continue to hold dialogues to exchange biodiversity information, improve access to technology and improve the utility of shared data

2. Continue to encourage the organization of National BONs, network of BONs facilitated by GEOBON

3. Promote coordinated and integrated observations in each country

4. a. Access support for training courses and collaborate with GBIF in improving skill development for data archiving.

   b. cultivate a culture of data sharing

4. Maintain data platforms established through GBIF, ABCDNET, and related other databases
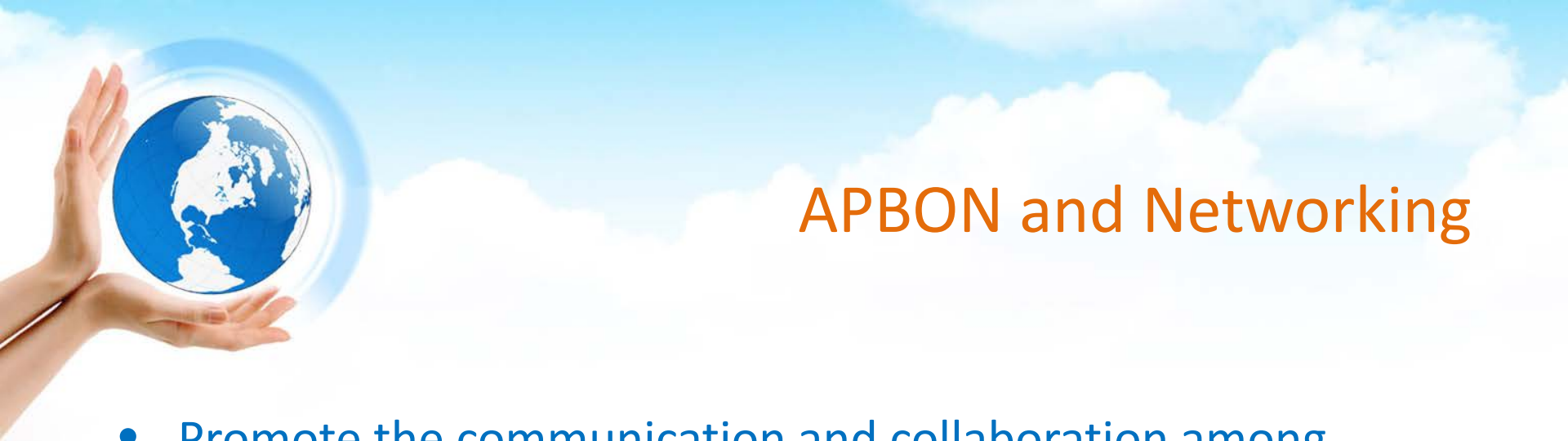
APBON and Networking

- Promote the communication and collaboration among biodiversity monitoring networks, initiatives and associate networks
- Acknowledge the difference in approaches, methods and the difficulty of standardizing methods and
  - work towards deriving solutions to certain science questions from which common goals and indicators can be identified
  - encourage the participation of researchers working in various ecosystems and for them to engage in discussions and collaboration in joint publications of data papers

Recommendations from APBON 08

Increase Access to Data

Promote Data Sharing Culture
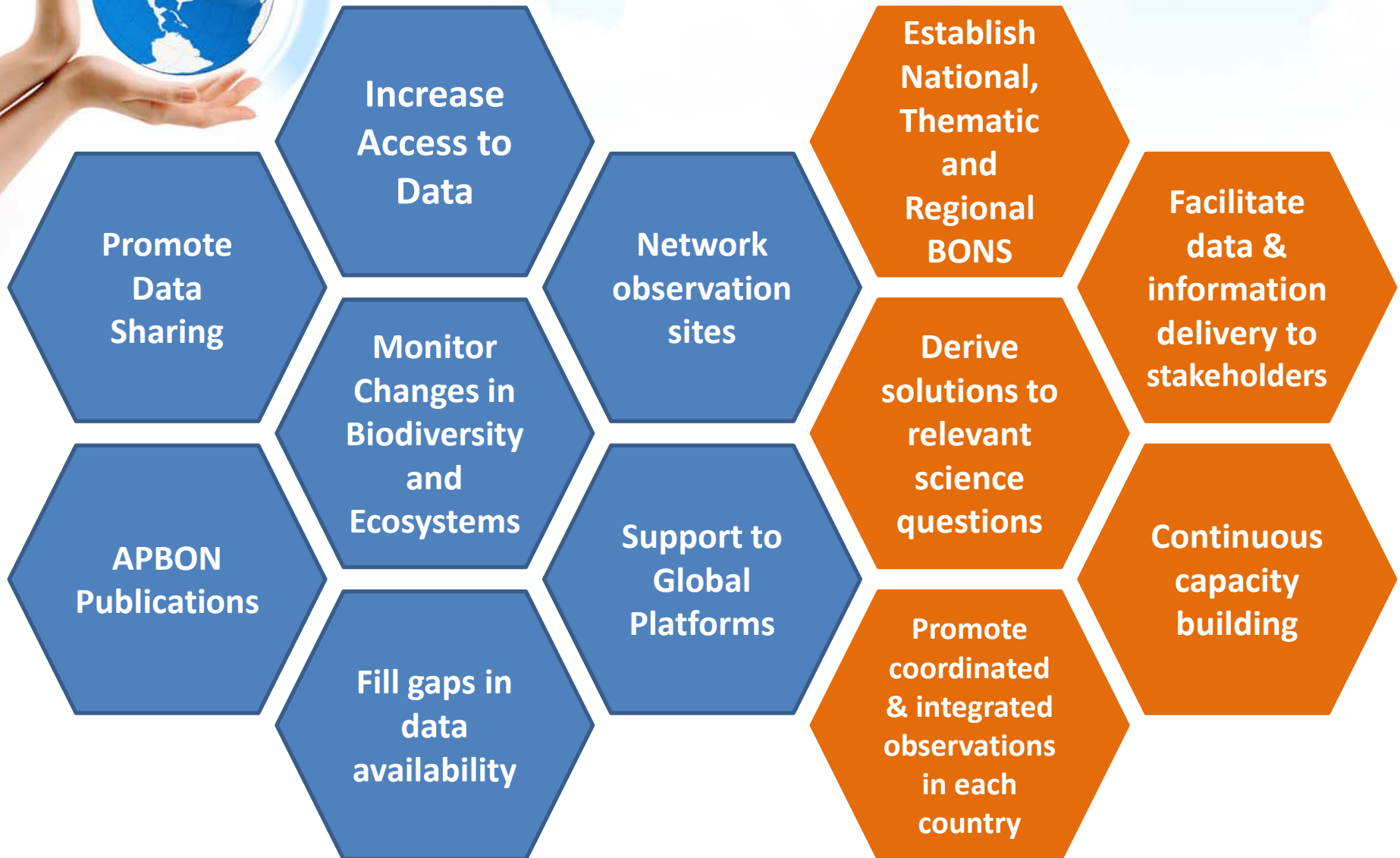
Network observation sites

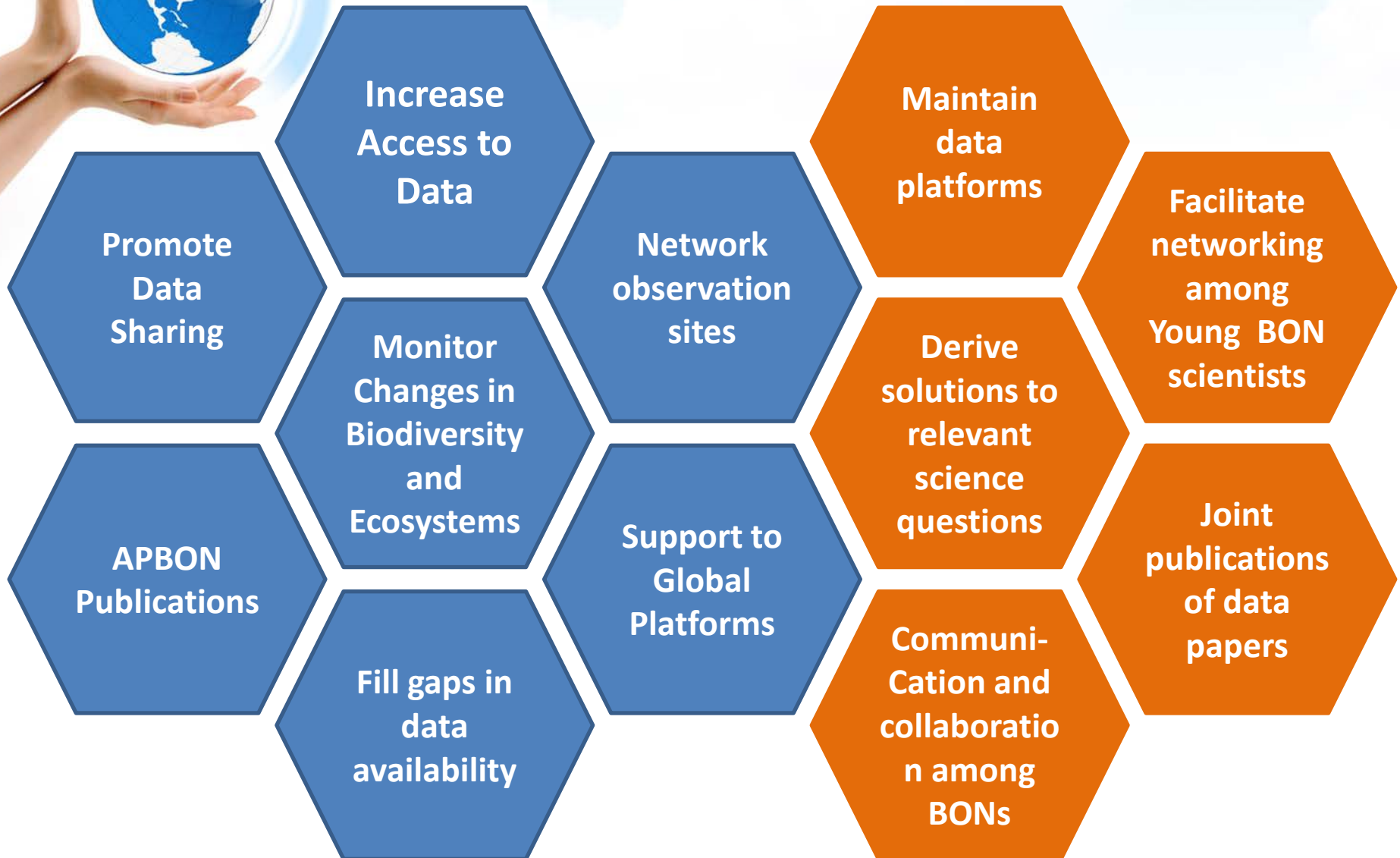**Monitor Changes in Biodiversity and Ecosystems**

APBON Publications

Support to Global Platforms

Fill gaps in data availability

Recommendations from APBON 09

- Increase Access to Data
- Promote Data Sharing
- Network observation sites
- Establish National, Thematic and Regional BONS
- Facilitate data & information delivery to stakeholders
- Monitor Changes in Biodiversity and Ecosystems
- Derive solutions to relevant science questions
- APBON Publications
- Support to Global Platforms
- Continuous capacity building
- Fill gaps in data availability
- Promote coordinated & integrated observations in each country

Recommendations from APBON 09

APBON will

Promote data sharing to increase access to biodiversity related information that will **enable the effective monitoring of changes in biodiversity and ecosystems**. **Gaps** in available information will be **addressed** by **improving collaboration among researchers** in observation sites, designing **incentives for data publications** and **deriving solutions to relevant science questions**. APBON sees the need to **improve communication and collaboration among BONs**, **to identify more national, thematic and regional BONs** and to **reach out to other parts of Asia and the Pacific**. The future of APBON relies on the participation of young scientists and will thus endeavor to **engage them in participating in deriving solutions to conservation issues and in preparing joint publications.**

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Thank you
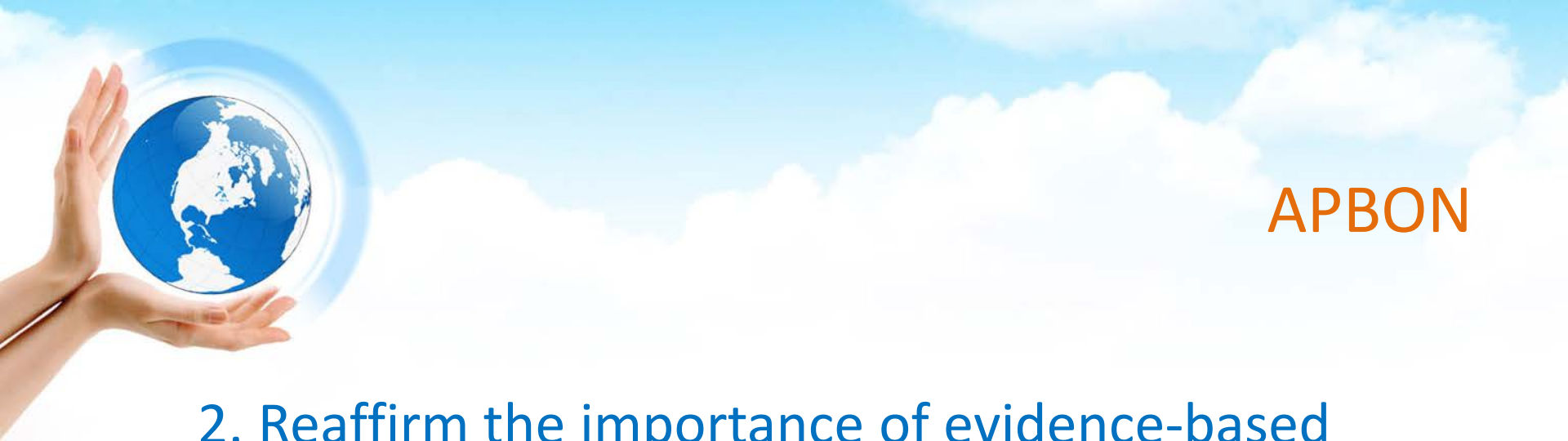
2. Reaffirm the importance of evidence-based data and knowledge in sound decision – making, policies and actions towards realizing the SDGs. These can be done through interdisciplinary coordination, capacity building, long-term in situ observations, large coverage high resolution observation technology in the context of an operational data sharing culture.

Promote Data Sharing

- **Promote Data Standards and Data tools (standard, system, service, infrastructure)**
- **Cultivate a data sharing culture**
- **Provide incentives for data paper publications**
- **Develop a mechanism on how to deliver ILTER results at the regional level**
- **Include data sharing as an objective of data collection**
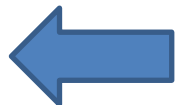
Increase Access to Data

- **Organize and publish Metadata**
- **Address data management issues with peers (metadata, semantic annotation)**
- **Promote publishing data from research (with a set time limitation)**
- **Publish data papers (e.g. data collected from PAs)**
- **Collaborate on organizing fish sounds data**
- **Multi stakeholder approach to address information gaps building on databases such as FishBase**
- **Develop APBON as a platform that accesses and analyzes data online without the traditional downloading of information**
- **Develop an Asian Tree Database**
  Develop checklists, specimen images, collaboration on taxonomy, Capacity Building, data summaries (counts, threat status, hot spots)
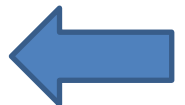
Fill gaps in data availability

- **Complete biodiversity data in selected sites through**
  a) camera traps
  b) soundscape monitoring and
  c) UAS (Unmanned Aerial Systems)

- **Support ILTER sites monitoring as well as lakes within the ILTER and sites outside of ILTER sites as necessary**

- **Use citizen science to record sounds**

- **Collaboration with FishBase on particular sites**

- **Long-term biodiversity research**

- **Work on animal migration**

- **Relate research work to genetics**

- **Work in the context of RRR (reserves, research and restoration)**

Monitoring Biodiversity / Ecosystems

- **Lowland tropical forests are one of the most vulnerable ecosystems and have not benefitted from long term monitoring related to climate change. Recommend understanding changes in tropical lowland forests.**

- **Increase capacity at the park / PA level (e.g. for staff to know how to curate survey data collected; familiarize on other methods eg sound, etc.)**

- **Address large scale questions when developing databases**

- **Develop supersites (link in situ and satellite observations)**

- **Collaborate on developing novel sensors / satellites for biodiversity observation**

- **Make non traditional information available (e.g. sound data) to monitor long term trends in biodiversity changes**

Support to Global Platforms

- **Contribute to IPBES**
- **Map APBON and ILTER activities to Global deliverables and commitments**
- **Contribute to CBD (SBSTTA, SBI)**
- **CITES, CMS, EAAFP, RAMSAR, Others**
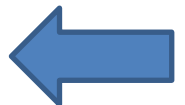
Networking

- **Improve synergy / collaborations**
- **Incorporating APBON sites to ILTER network**
- **Collaborate with new GEO Structure, link data with satellite data**
- **Collaboration with IUCN**
- **Collaborate with networks to address larger scale questions (work with available data)**
- **Define links with new GEO BON structure**
- **Contribute data to GBIF / Strengthen GBIF**
- **Utilize data observation network for earth (DataONE)**
- **ABCD Net?**
- **FishBase: Information Sharing, FeedBack, Review and validation of information**
- **For FishBase – join a Network of Networks such as the GLEON (Global Lake Ecological Observatory Network) ; Develop means to link data online**
- **Work with IT people to increase efficiency of data analysis**