Annex 11

BIFA Status Report

Development of the Biodiversity Database System in Vietnam

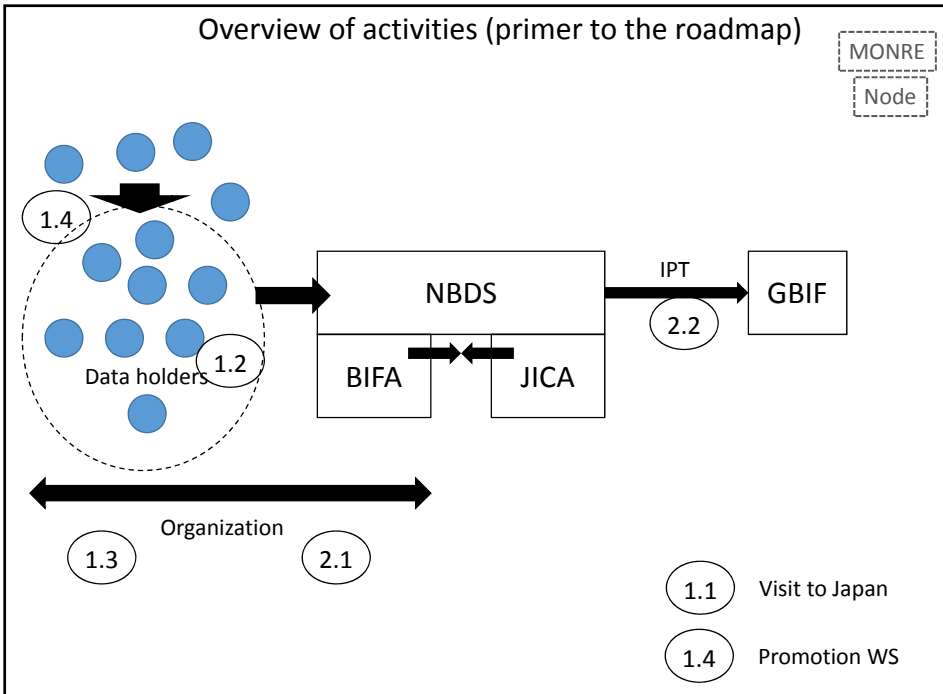
Objective: To build capacity of Vietnam in biodiversity information and database management and preparation to actively take part in GBIF.

Outline:

1) VN reps. to visit Japan.
2) Training/promotion workshop in VN.
3) Development of a roadmap to participate GBIF.

7th GBIF Asian Nodes Meeting
Tagaytay, Philippines, 28-30 June 2016

Overview of activities (primer to the roadmap)



Current Status

1) First visit of 4 persons from VN (13-18, June)

2) Next workshops in VN in preparation
3 times in June, July, Sept. in assoc. with JICA.

Outline of the Program (1)

Day 1

- Welcome and self-introduction
- Review of the Proposal of the Mentoring Program
- Introduction to GBIF
- Activities in Asia Region
- Observation on specimen collection and data digitization from external view
- Applying cumulated data to political decision making
- Introduction to Biodiversity Informatics
- What is “Open Data”, what is “Data Paper”
- Status of biodiversity informatics in Vietnam

Outline of the Program (2)

Day 2

- Introduction to the status of Japanese Node (JBIF)
- How Science Museum Net works
- Accelerating data mobilization from Natural Historical Collection
- Discussion regarding the possible organization of Vietnam Node
- Discussion on the data mobilization

Day3

- IPT function and data exploitation
- Examples of exploitation of the data in GBIF
- IPT (Local use)

Day4

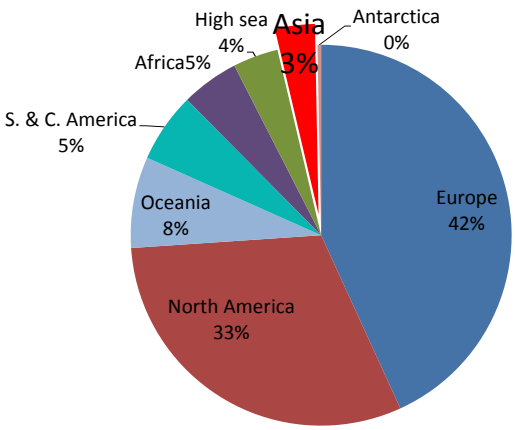
- Visit to National Institute of Genetics

Accelerating data mobilization from Natural Historical Collection

Masanori Nakae/Tsuyoshi Hosoya
National Museum of Nature and Science, Japan
Japan node of GBIF

7th GBIF Asian Nodes Meeting
Tagaytay, Philippines, 28-30 June 2016

Data from Regions



More data from Asia wanted!

GBIF'S TASK FORCE MEMBERS

1. Leonard Krishtalka, USA, Chair
2. Barbara Thiers, USA
3. Deborah Paul, USA
4. Eduardo Dalcin, Brazil
5. Masanori Nakae, Japan
6. Ian Owens, UK
7. Jean Ganglo, Benin
8. Marc Pignal, France

- Siro Masinde, GBIFS task force Coordinator

Photo by S. Masinde: GBIF task force meeting, 3 Nov 2015.

GBIF

Global Survey on NHC by GBIF TF

Purpose: To determine

(1)the digital readiness of the world's biocollections and their institutions;

(2) the benefits to the collection/institution that digitization engenders;

(3) the impediments to collection data digitization.

In the late 2015

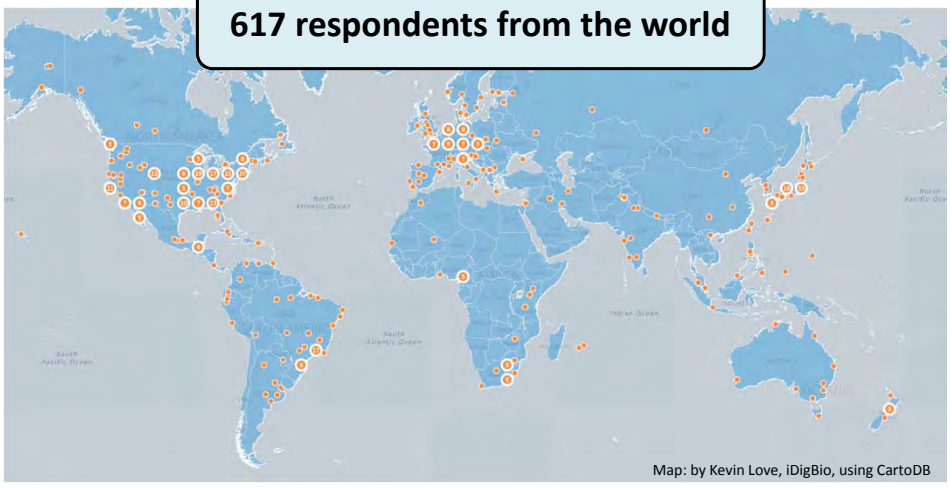
Global Survey on NHC by GBIF TF

Main distribution channels for the survey:

- Taxacom
- Herbaria-L
- iDigBio
- GBIF Node Managers
- SERNEC
- NHColl
- GRBio
- Index Herbariorum
- TDWG
- MUSEUM-L
- S-Net

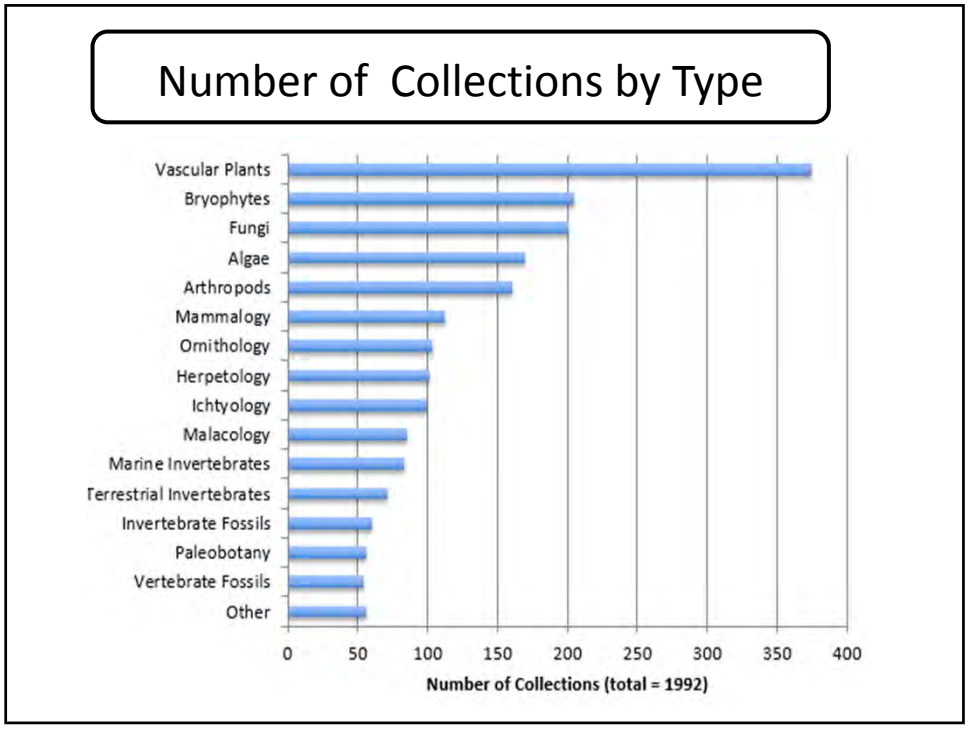
Global Survey by GBIF TF

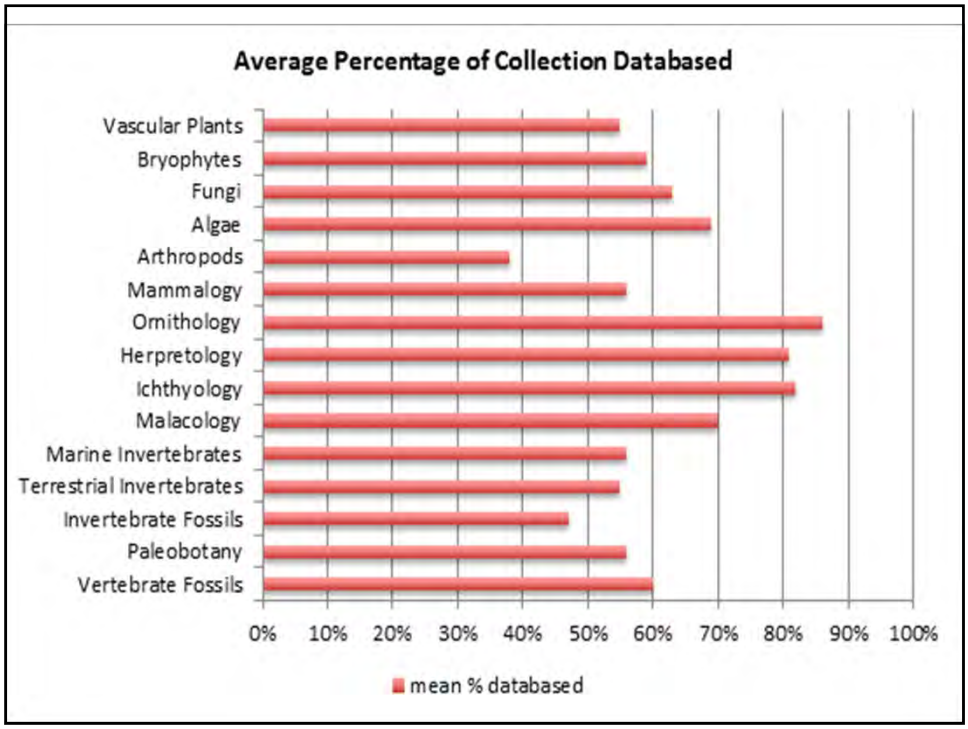
617 respondents from the world



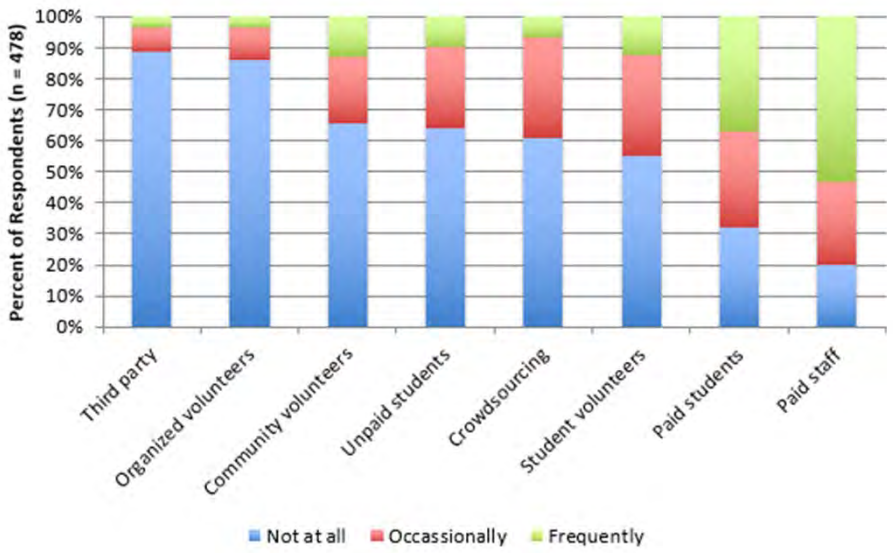
Map: by Kevin Love, iDigBio, using CartoDB

Annex 12- Accelerating data mobilization from NHC





Who is doing the digitization?

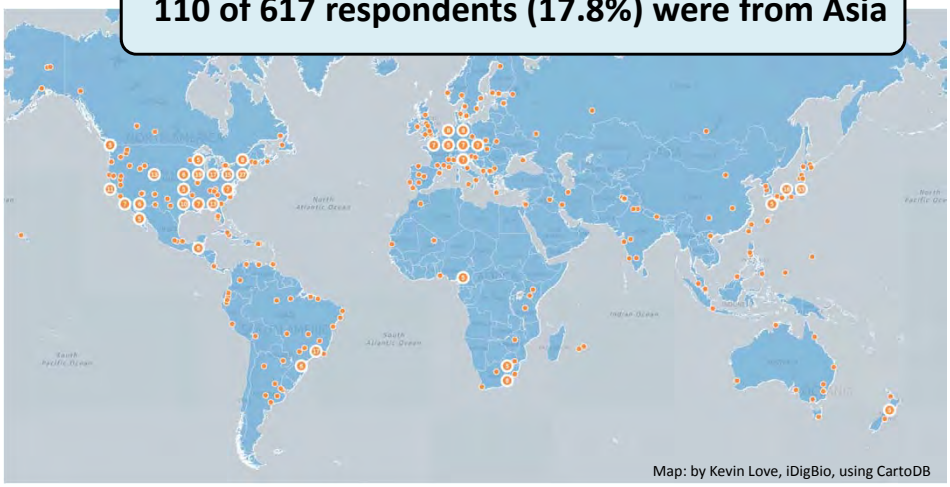


Barriers to digitization

1. Funding / resources not available (80%)
2. Lack of time among personnel (80%)
3. Size of task is overwhelming (40%)
4. Not an institutional priority (35%)
5. Collection data has errors (30%)
6. Limited expertise among personnel (25%)
7. Insufficient information on digitization process (15%)
8. No benefit to reappointment, tenure, ... (14%)
9. Not a priority of the individual in charge (12%)
10. Not a good effort / payoff ratio (10%)

Global survey by GBIF TF

110 of 617 respondents (17.8%) were from Asia



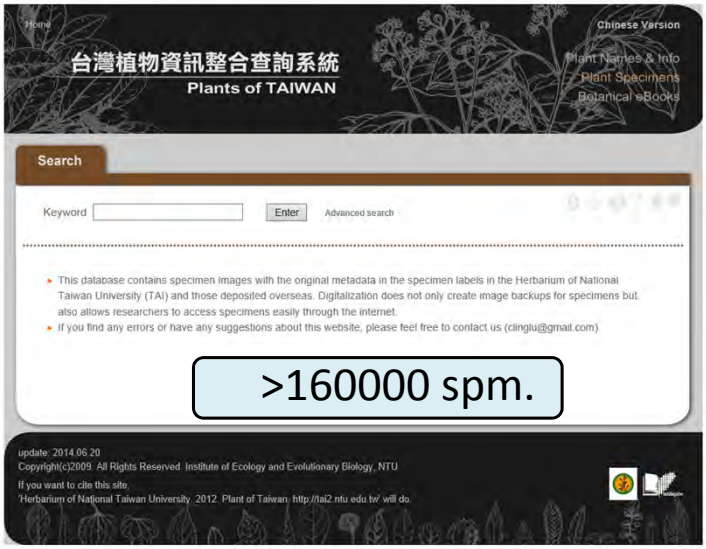
- East Asian countries are comparatively advanced in digitization
- Digitization in Southeast Asian countries is less progressed
- Census of NHC is uncertain in western Asia

Annex 12- Accelerating data mobilization from NHC

Digitization of NHC in Asia

1. Plants
2. Animal
3. Fossil
4. ….

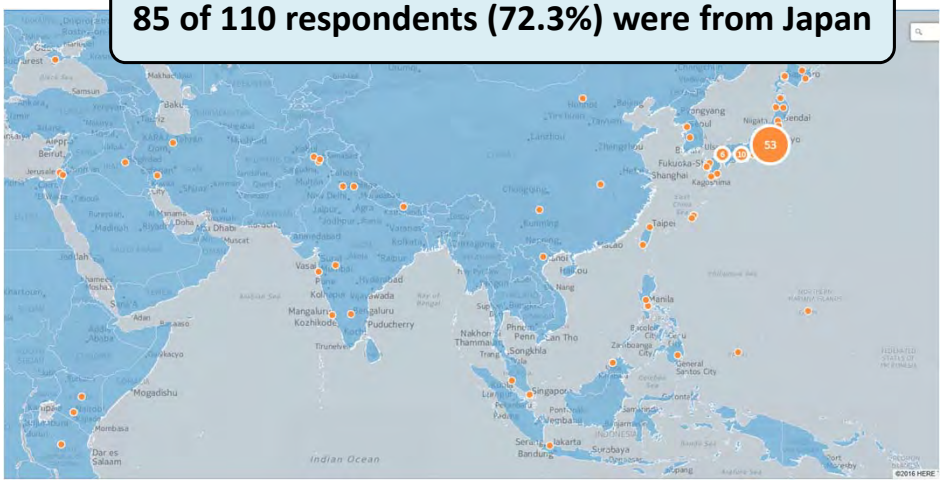
Digitization of NHC in Asia



>160000 spm.

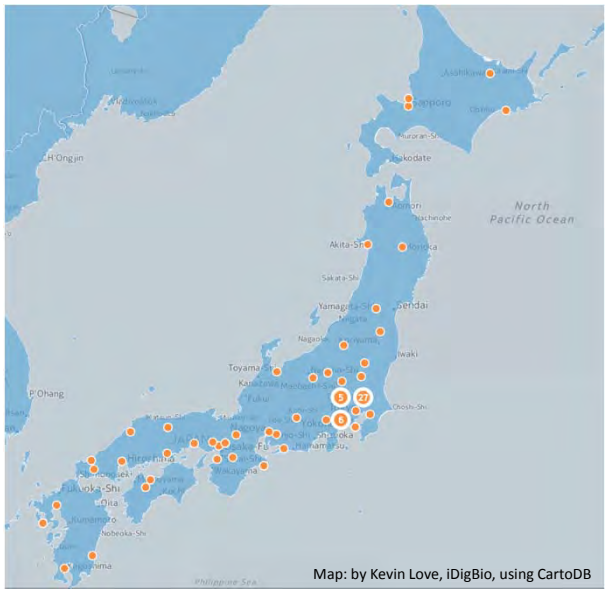
Global Survey by GBIF TF

85 of 110 respondents (72.3%) were from Japan



Map: by Kevin Love, iDigBio, using CartoDB

Results of the Global Survey in Japan



Map: by Kevin Love, iDigBio, using CartoDB

Museum collections

Total: 49 Institutions 304 collections

Collections	No of Inst.	%
Algae	13	27%
Arthropods	40	82%
Bryophytes	11	22%
Invertebrates, terrestrial (other than arthropods and mollusks)	10	20%
Fungi including lichens	17	35%
Herpetology (reptiles & amphibians)	22	45%
Ichthyology (fishes)	23	47%
Invertebrate Paleontology	13	27%
Malacology (Mollusks)	23	47%
Mammalogy	29	59%
Marine Invertebrates	22	45%
Ornithology (birds)	27	55%
Paleobotany & Palynology (fossil plants & pollen)	9	18%
Vascular Plants	33	67%
Vertebrate Paleontology	10	20%
Other	2	4%

Museum collections

Total: 49 Institutions 304 collections

Collections	No of Inst.	%
Algae	13	27%
Arthropods	40	82%
Bryophytes	11	22%
Invertebrates, terrestrial (other than arthropods and mollusks)	10	20%
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Paleobotany & Palynology (fossil plants & pollen)	9	18%
Vascular Plants	33	67%
Vertebrate Paleontology	10	20%
Other	2	4%

Barriers to digitization

81 Respondents

	Respondents	%
Not an institutional priority	27	33%
Not a collection priority	2	2%
Not a priority of the individual in charge of the collection	23	28%
Funding/resources not available	47	58%
Lack of time among personnel	74	91%
Limited expertise among personnel	17	21%
Insufficient information on digitization process and	10	12%
Collection data has errors that must be corrected prior to any digitization effort	26	32%
Lack of perceived need (not convinced it is necessary or worthwhile)	0	0%
Size of task is overwhelming	56	69%
Collection deemed not sufficiently valuable to merit digitization	1	1%
Not a good effort/payoff ratio	8	10%
No benefit to reappointment, tenure or promotion at my institution	19	23%
Not sustainable	3	4%
Not willing to share data	1	1%
Other	8	10%

Accelerating data mobilization from Natural Historical Collection

・Accelerating digitization of specimens data in southeast Asia is important
（in particular, those in biodiversity hotspots）

To facilitate digitization of NHC…

・Constituting domestic and international network is useful

Proposal from Regional Rep.

1. Participation to the survey (Respond to the questionnaires).

2. To facilitate response, how about translating the questionnaires.

Regional and sub-regional assessments of biodiversity and ecosystem services in ASIA PACIFIC region

Gautam

Overall scope of Assessment

- Assessment of the status and trends regarding biodiversity, ecosystem functions and ecosystem services and their inter-linkages,
- Impact of biodiversity, ecosystem functions and ecosystem services and threats for indicators of good quality life
- Influence on the effectiveness of responses including the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets and the NBSAP developed under CBD convention

Scope Specific to APR

- Identify challenges found across the APR including climate change (particularly sea-level rise, increased intensity of extreme storm events, ocean acidification and glacier retreat) population growth, poverty, human consumption of natural resources, land degradation, deforestation, invasive alien species, trade
- Positive trends of increase in awareness, forest cover and protected areas and a reduction in the region's carbon footprint.
- Issues specific to APR such as the interplay between food, water and energy security; biodiversity and livelihoods; waste management; and cooperative management of critical ecosystems shared by more than one country.

Geographic Scope of Assessment

Subregions	Countries and territories
Oceania	Australia, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. Pacific island territories of Cook Islands, New Caledonia, American Samoa,[a] Tokelau,[a] French Polynesia,[a] Niue,[a] Guam,[a] Commonwealth of the Northern Mariana Islands, Pitcairn Island[a] and Wallis and Futuna.[a] Oceanic and sub-Antarctic islands in the Pacific region (or Pacific and Indian Ocean regions)
South-East Asia	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam
North-East Asia	China, Democratic People's Republic of Korea, Japan, Mongolia and Republic of Korea
South Asia	Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan and Sri Lanka
Western Asia	Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates and Yemen (Arabian peninsula), Iraq, Jordan, Lebanon, State of Palestine and Syrian Arab Republic (Mashriq)

Objective of regional and subregional assessments

Strengthen the science-policy interface on biodiversity, ecosystem functions and ecosystem services at the regional and sub-regional levels

Rationale of assessment in APR context

- Asia-Pacific region hosts some of the world's most important biological, cultural (including indigenous and local knowledge), geographic and economic diversity
- The substantial rate of biodiversity loss in the region has a significant impact on human well-being.
- The assessment will review the status of biodiversity and ecosystem services pertaining to human well-being in the region through the lens of the sustainable development agenda and the forthcoming sustainable development goals

Chapter outline

Annex 13-Asia Pacific Sub-Regional Assessment IPBES

The assessment of the Asia-Pacific region will follow the chapter outline set out in the generic scoping report

Chapter-I :	Setting the scene
Chapter-II:	Nature's benefits to people and quality of life
Chapter –III:	Status, trends and future dynamics of biodiversity and ecosystems underpinning nature's benefits to people
Chapter-IV :	Direct and indirect drivers of change in the context of different perspectives on quality of life
Chapter-V :	Integrated and cross-scale analysis of interactions of the natural world and human society
Chapter-VI	Options for governance, institutional arrangements and private and public decision-making across scales and sectors

Process and timeline

Activities	Quarter wise timeline		
	2015	2016	2017
Finalization of themes for assessments and institutional arrangements for technical support	I		
Secretariat compiles lists of nominations; Finalization of coordinating lead authors	II		
First author meeting	III		
First draft of chapters prepared for the regional assessment		I	
First draft of regional assessment sent for expert review		II	
Second author meetings		III	

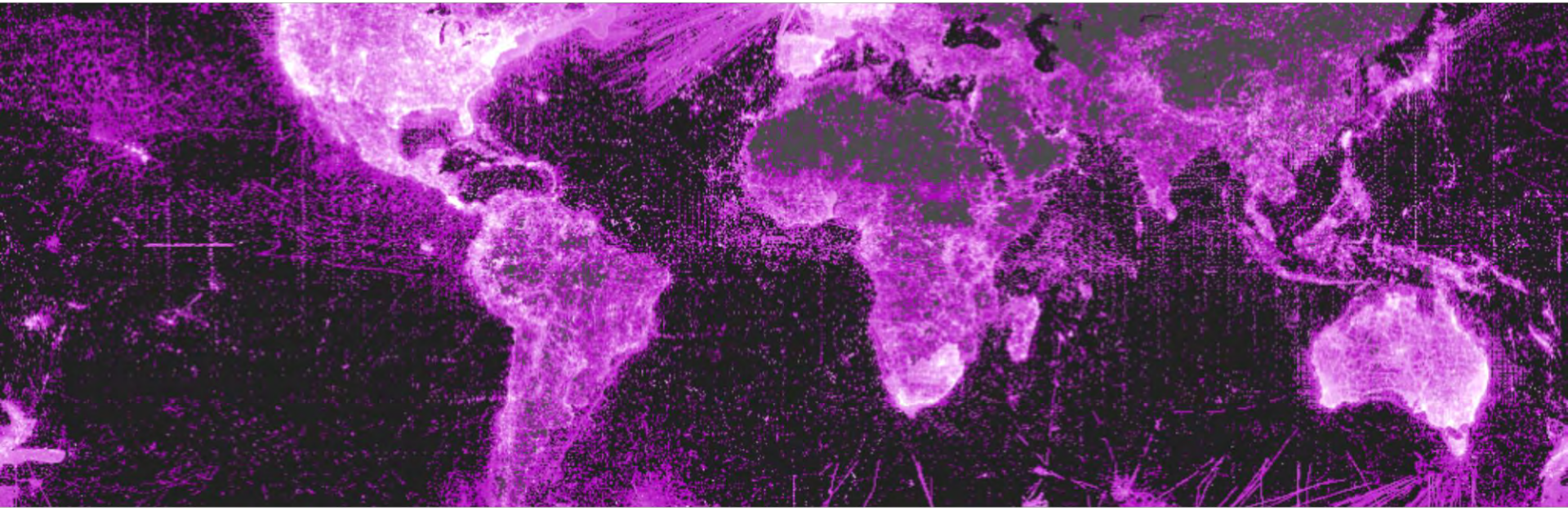
Process and Timetable Contd..

Activities	Quarter wise timeline		
	2015	2016	2017
Collation of review comments for second draft			I
Third author meeting for the regional assessment			III
Final text changes to regional assessment and the summary for policymakers			III
Translation of summary for policymakers into the six official languages of the United Nation			III
Submission of the regional assessment, including the translated summary for policymakers, to Governments for final review prior to Plenary			IV
Final government comments on the summary for policymakers for consideration by authors prior to the next Plenary session			IV

Thank you

Annex 14

GBIF Global Biodiversity Information Facility



GBIF Strategic Plan and draft Work Programme 2017-21

Tim Hirsch, Deputy Director, GBIF Secretariat

7TH GBIF ASIA NODES MEETING, TAGAYTAY, PHILIPPINES, 28-30 JUNE 2016

TIMELINE FOR STRATEGIC PLAN 2017-2021

2015:

- Brainstorming of Nodes Steering Group, Science Committee, Secretariat on priorities for new Strategic Plan (Q1)
- Draft SP priorities circulated for wider consultation (Q2)
- Draft SP approved by Governing Board pending some adjustments (Q3)
- Final Strategic Plan approved (Q4)

2016

- Release as public document (pending)

http://www.gbif.org/sites/default/files/documents/Approved_Strategic_Plan_2017-2021.pdf

GBIF

TIMELINE FOR WORK PROGRAMME 2017-2021

2016

- Development of consultation draft (Q2)
- Circulation of consultation draft (July)
- Responses from community including ‘pledges’ on activities from Participants (July/August)
- Publication of revised draft (September)
- Discussion/approval by Governing Board (October)

STRATEGIC PLAN PRIORITIES

Deliver relevant data

Improve data quality

Fill data gaps

Enhance biodiversity data infrastucture

Empower global network

EMPOWER GLOBAL NETWORK

"Ensure that governments, researchers and users are equipped and supported to share, improve and use data through the GBIF network, regardless of geography, language or institutional affiliation."

Potential Work Programme activities associated with this priority:

- **Focus on people** (individual roles, digital badges, community collaboration)
- **Strengthen skills (**develop helpdesk capacity, deliver curriculum and training materials**)**
- **Equip nodes** (ongoing capacity self-assessment, build re-usable national/regional platform tools, mentor node managers)
- **Equip data publishers (**self-assessment for data holders, promote publication of collection metadata, simplify data publication, online reporting of data use for data publishers)
- ...

GBIF

EMPOWER GLOBAL NETWORK

"Ensure that governments, researchers and users are equipped and supported to share, improve and use data through the GBIF network, regardless of geography, language or institutional affiliation.."

Potential Work Programme activities associated with this priority:

- …
- **Expand national participation** (multi-language support, coordinated engagement, regular progress assessment)
- **Plan implementation (**better nodes/GB integration, expand regional meetings, align better with other networks**)**
- **Coordinate resources (**Sec to coordinate Participant-led activities aligned with WP, concept notes/proposals for supplementary funding**)**

GBIF

ENHANCE BIODIVERSITY INFORMATION INFRASTRUCTURE

"Provide leadership, expertise and tools to support the integration of all biodiversity information as an interconnected digital knowledgebase."

Potential Work Programme activities associated with this priority:

- **Modernise data standards** (shared domain model for sharing/linking all components of biodiversity information, review of DwC, explore evolution of DwC-A to W3C CSV on the Web formats)
- **Deliver names infrastructure** (comprehensive nomenclatural dataset in partnership, promote publication and use of species checklists)
- **Catalogue collections (**partner to deliver single NHC catalogue, use collections metadata as first stage in content mobilization**)**

GBIF

FILL DATA GAPS

"Prioritize and promote mobilization of new data resources which combine with existing resources to maximize the coverage, completeness and resolution of GBIF data, particularly with respect to taxonomy, geography and time."

Potential Work Programme activities associated with this priority:

- **Identify priority gaps** (capture data requirements from expert groups, users; visualize strengths/weaknesses in key dimensions)
- **Expand data streams** (promote sampling event model for ecological/monitoring datasets, integration from literature, molecular linkages, remote sensing)
- **Engage data holders** (untapped NHCs, citizen science, private sector)
- **Rescue datasets** (tools for reporting potential data sources, collaborative data preparation/mapping to GBIF, data papers for rescued datasets)
- **Liaise with journals (**scalable approach to support journals publishing data to GBIF, inc. use of hosted IPT infrastructure)

IMPROVE DATA QUALITY

"Ensure that all data within the GBIF network are of the highest-possible quality and associated with clear indicators enabling users to assess their origin, relevance and usefulness for any application."

Potential Work Programme activities associated with this priority:

- **Ensure data persistence (**identify/verify 'orphan' datasets**,** publish reference instances, seek 'adoption' by suitable agencies/experts)
- **Assess data quality** (re-usable data validation tools framework, integrate into all platforms, transparent validation, quality reports**)**
- **Enable data curation (**network-wide approach to annotation/feedback, enable dataset-level peer review, tools for sharing cleaned datasets, data workbench tool for e.g. Red Listing**)**

DELIVER RELEVANT DATA

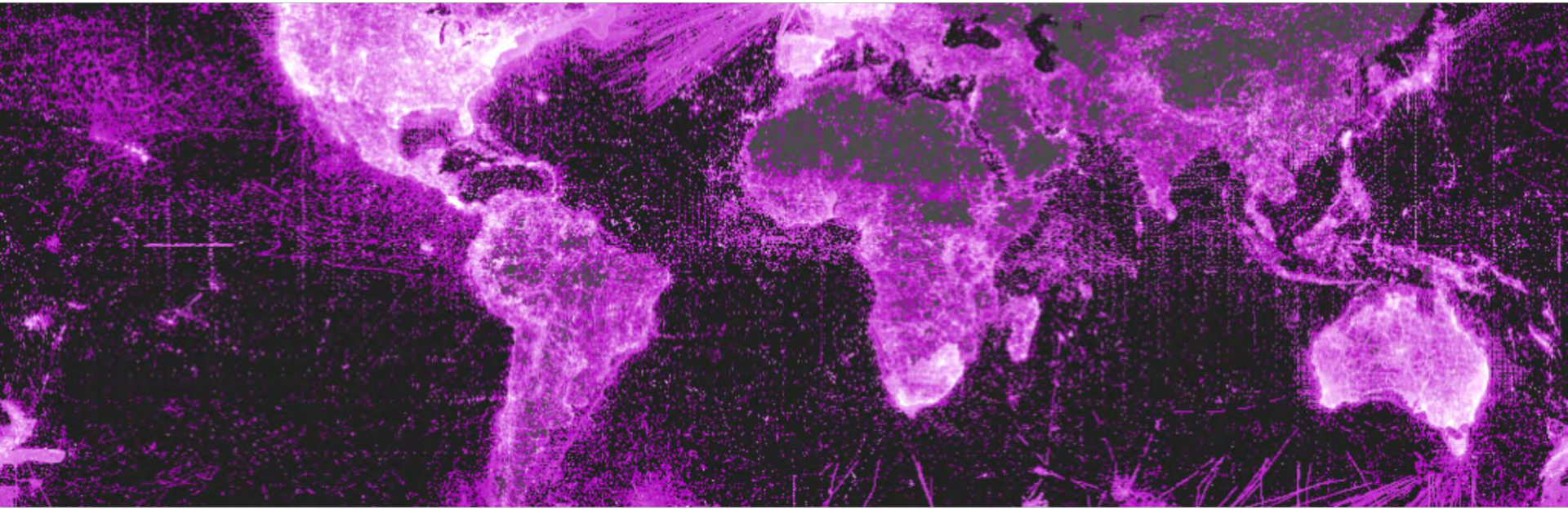
"Ensure that GBIF delivers data in the form and completeness required to meet the highest-priority needs of science and, through science, society."

Potential Work Programme activities associated with this priority:

- **Engage academia (**promote BI curriculum, publicize GBIF as data tool through univ libraries, faculties, helpdesk for users)
- **Document needs (**prioritise and support ongoing fitness-for-use assessments)
- **Support biodiversity assessment** (enhance presentation of sampling event data, support EBVs for distributions/population abundance)
- **Assess impact** (automate detection and reporting of DOI use, mechanisms to report/track grey literature uses, develop valuation model for GBIF services)

GBIF Global Biodiversity Information Facility

Annex 15



BIFA PHASE 2

Tim Hirsch, Deputy Director, GBIF Secretariat

7TH GBIF ASIA REGIONAL NODES MEETING, TAGATAY, PHILIPPINES, 28-30 JUNE 2016

BIFA PHASE 2

€142,857 available for second round

Approx €20k required for overheads (e.g. call design, proposal evaluation, contracting, reporting)

Say €120k available for funding

BIFA PHASE 2

Option for discussion (proposed by D Hobern)

1. Asian Biodiversity Informatics Conference (50%)

2. Small data mobilisation grants (50%)

BIFA PHASE 2

Option for discussion (proposed by D Hobern)

2. Small data mobilisation grants (50%)

- Based on BID small grants to assist mobilisation of data from existing collections/field research
- Possibly limit of €10k per institution
- Focussed on targeting key gaps in biodiversity data for Asia region

BIFA PHASE 2

Option for discussion (proposed by D Hobern)

1. Asian Biodiversity Informatics Conference (50%)

- Based on GBIO framework document
- Bring together researchers, computer scientists, policy experts from Asia region to develop vision for decade
- Clarify connection between IPBES, GEOBON, APBON, LTER etc
- Seek cofunding
- Build on work around ABIO

Annex 16

BIFA

What is BIFA ?: Biodiversity Information Fund for Asia, a contribution from Japanese government.

Amount: €156,000 (to be spent in 2 years incl. 2015)
€142,000 (2016)

Steering committee: JP-MoE, Regional Rep, GBIFS.

Allocation of funds, based on categories outlined in GBIFS letter to MoE), i.e.

a. Partial funding for Asia regional meeting
b. Support for regional activities identified as priorities by GBIF Asia nodes.
c. Capacity-related activities (e.g. training, workshops), with particular emphasis on the ongoing JICA project with Vietnam
d. GBIF-related activities potentially supporting the work of IPBES

http://www.gbif.org/page/82120

Currently selected projects

01 **Strengthening GBIF Philippines**
02 Establishing GBIF Activities in ICIMOD Member Countries
03 Taxonomic Capacity for Marine Data Mobilization
04 **Mobilising data from ASEAN Protected areas**
05 **Biodiversity Informatics Curriculum**
06 Web presence for national Nodes
07 **Development of Biodiversity data system in Vietnam**
08 Checklist development for India

Annex 17

Regional Strategy

7th GBIF Asian Nodes Meeting
Tagaytay, Philippines, 28-30 June 2016

Asian Regional Strategy

Strategy 1: **Build network** of data holders and providers in the region by sharing information on GBIF and regional nodes informatics infrastructure as well as information on existing thematic databases such as FishBase, IBIN, ILTER, species group networks.

Strategy 2: **Popularize the data paper** incentive through development of metadata catalogues and corresponding datasets.

Strategy 3: Explore (funding) options for **mobilising legacy data** housed in museums and herbaria and (mechanism) for repatriation of biodiversity data from Asia housed in other countries.

Strategy 4: Strengthen help desk facility at regional nodes to **ensure the use of DwC-A standard** for generating new biodiversity data (metadata, occurrences, checklist) and to better mobilise the publishing of data through GBIF IPT platform.

Scientific activities

1. Making species checklist at national level, including invasive, Red List, endemic species and migratory birds.
2. Updating fish databases to assess fish biodiversity loss and risk in Asia.

New Priorities

1. **Deliver relevant data**
2. **Improve data quality**
3. **Fill data gaps**
4. **Enhance biodiversity informatics infrastructure**
5. **Empower global network**

Annex 18

Discussion on Regional Strategy: Challenges and actions

2016/6/29

The following items were captured during the discussion in the meeting. Challenges indicated for each Priority in Global Strategic Plan with "Century" font. Since there were many challenges in "EMPOWER GLOBAL NETWORK", they were clustered, and the detail is cited in Appendix. Following the challenges, actions are written in Arial font. For convenience, each action is numbered.

EMPOWER GLOBAL **NETWORK**

*For detailed challenges, see appendix 1

Challenge 1: Capacity building

1. Capacity building
2. Align biodiversity survey methods with DwC
3. Continuing capacity building of partners
4. Develop Biodiversity Informatics and training curriculum for university
5. Develop tools for facilitating data restructuring into DwC-A star-scheme
6. Development of protocol for approval of registration request for data publishers
7. Set up information sharing mechanisms in countries
8. Strengthen cooperation (regional, international)
9. Develop apps to enable point, shoot and send facility
10. Incorporate capacity building for biodiversity data management in NBSAPs
11. Explore attendant at partner organized event (eg ILTER, Oct 26-29-2016)

Challenge 2: Language barrier

12. Translation/development of guidance documents available in GBIF

Challenge 3: Outreach / education (to non-member countries)

13. Massive campaign [seminar, conference, policy dialogue]
14. Promotion/strengthen awareness of importance of science based BD data for conservation planning, decision making and monitoring
15. Outreach to non-GBIF countries to show benefit in participation
16. Engage national government to buy into GBIF role in the region
17. Promote open data & knowledge in biodiversity
18. Develop regional/sub-regional expansion strategy

Challenge 4: Funding

19. Allocation of funds to support mentoring

20. Pilot integration of bioinformatics in tertiary level education
21. Comprehensive proposal considering regional/sub-regional issue with database as an element

ENHANCE BIODIVERSITY INFROMATICS **INFRASTRUCTURE**

Inadequate infrastructure (IPT) in the region

Conveying relevance of work being done

1. Promote publishing national and regional checklist

FILL DATA **GAPS**

Data gaps exist in various forms [taxonomic, geographic]

Outdated information data

Engaging common citizens

1. Development of incentive mechanism to encourage partners

Limited data types –checklist/occurrence and sampling-event

Mobilizaing new data types

2. Develop tools platform for managing/publishing camera trap data
3. Increase interest and data mgt capacity among taxonomists and biodiversity expert

Data repatriation

Legacy data

4. Engage (academic) institution in countries/ area where data gaps are evident

IMPROVE DATA **QUALITY**

Data duplication

Analysis of data at hand for status evaluation objectively

Biodiversity conservation not priority issue of government -> have no activities for surveying, monitoring assessing to update bioinformation and improve data quality

Improve / ensure data quality

1. Development of dictionaries/tools to accelerate data input and reduce errors in data input

DELIVER **RELEVANT DATA**

National policies influence decision of data sharing

Engaging with other stakeholders

Securing commitment of data providers

1. Help translate the subtitles of BITC webinars
2. Capture knowledge/data gaps from IPBES etc.

3. Develop biodiversity informatics and training for universities
4. Improve GBIF-APBON links in terms of data provision

Appendix 1: Challenges identified for “Empower Global Network”

Ch 1: Capacity building

Continuing capacity building of the partners

GBIF technology too difficult for non-IT staff

Some/several dataset are not interoperable

Biodiversity data in different/various format

Adopting to common data structure

Ch 2: Language barrier

Biodiversity data in local dialect languages

Ch 3: Outreach / education (to non-member countires)

Communication strategy

Too few GBIF Nodes in Asia

Connection with biodiversity related initiatives

Limited awareness effort to bring new members

Improve visibility of NODES

Visibility

Lacking modules to be taught in schools and colledges

Ch 4: Funding

Limited funds to sustain regional activities

Lack of funds / limited funds allocated for Biodiversity database management

Biodiversity informatics specialist

Funding

Annex 21

Selecting Important Habitats

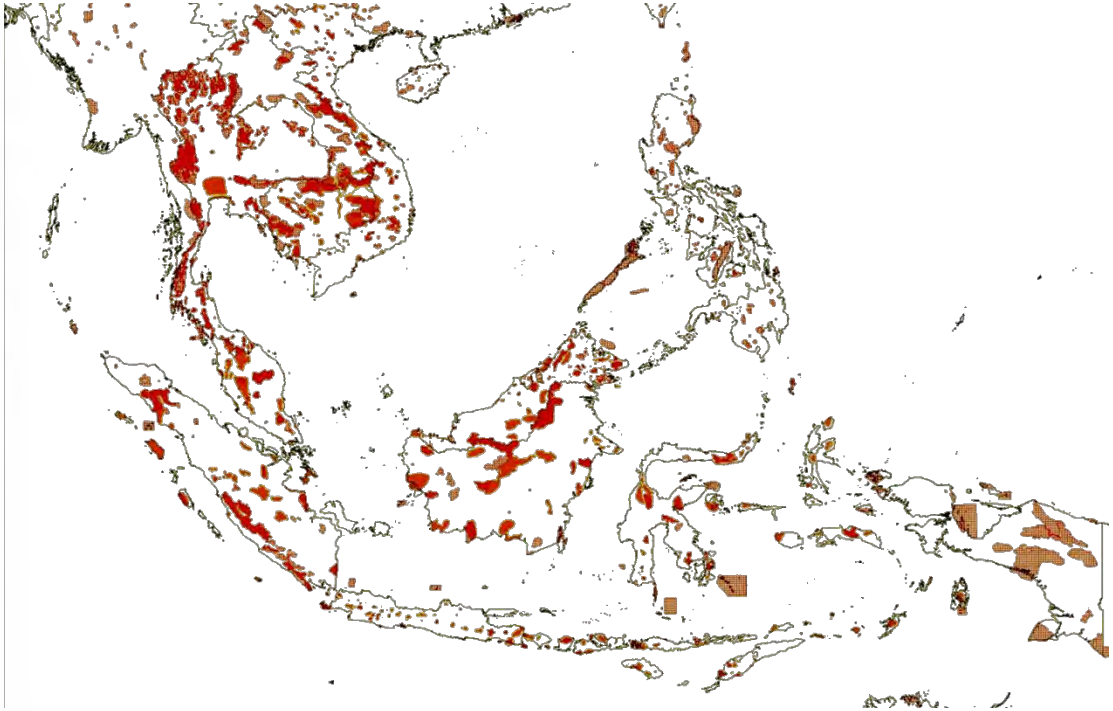
Examples of Sites with Important Biodiversity

Alliance for Zero Extinction (AZE)	Global list of sites where species are in imminent danger of disappearing
ASEAN Heritage Parks	Regionally important protected areas within the ASEAN member countries
Biodiversity Hotspots	Global priorities for biodiversity conservation based on large-scale ecoregions
Marine Protected Areas (MPAs)	Globally applicable classification to conserve biodiv… productivity of the oceans
Endemic Bird Areas	Critical regions of the … of restricted range bird species
Global 200 Ecoregions	Lar… …ons for the conservation of the most outstanding and … of the world's habitats
Impo…	Globally important sites for the conservation of bird species
Important Plant Areas	Globally important sites for conservation of plants
Key Biodiversity Areas	Globally significant sites for biodiversity conservation identified using universal standards
Man & the Biosphere Reserves (MAB)	A global network of internationally recognized places dedicated to demonstrating innovative approaches to sustainable development
Megadiversity Countries	Countries of the world with the greatest levels of biodiversity

Alliance for Zero Extinction (AZE)

Endemic Bird Areas

Important Bird Areas

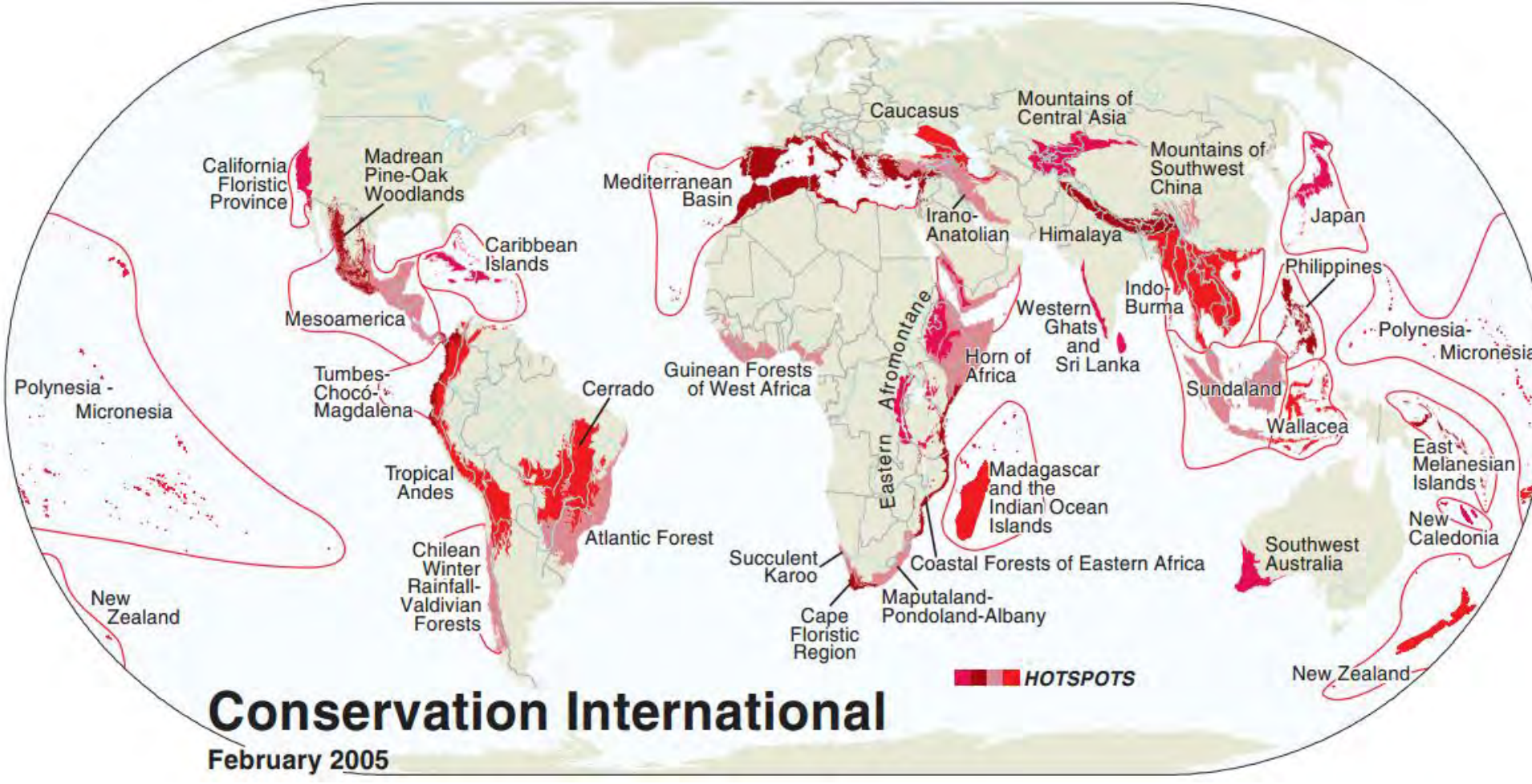


Megadiverse Countries

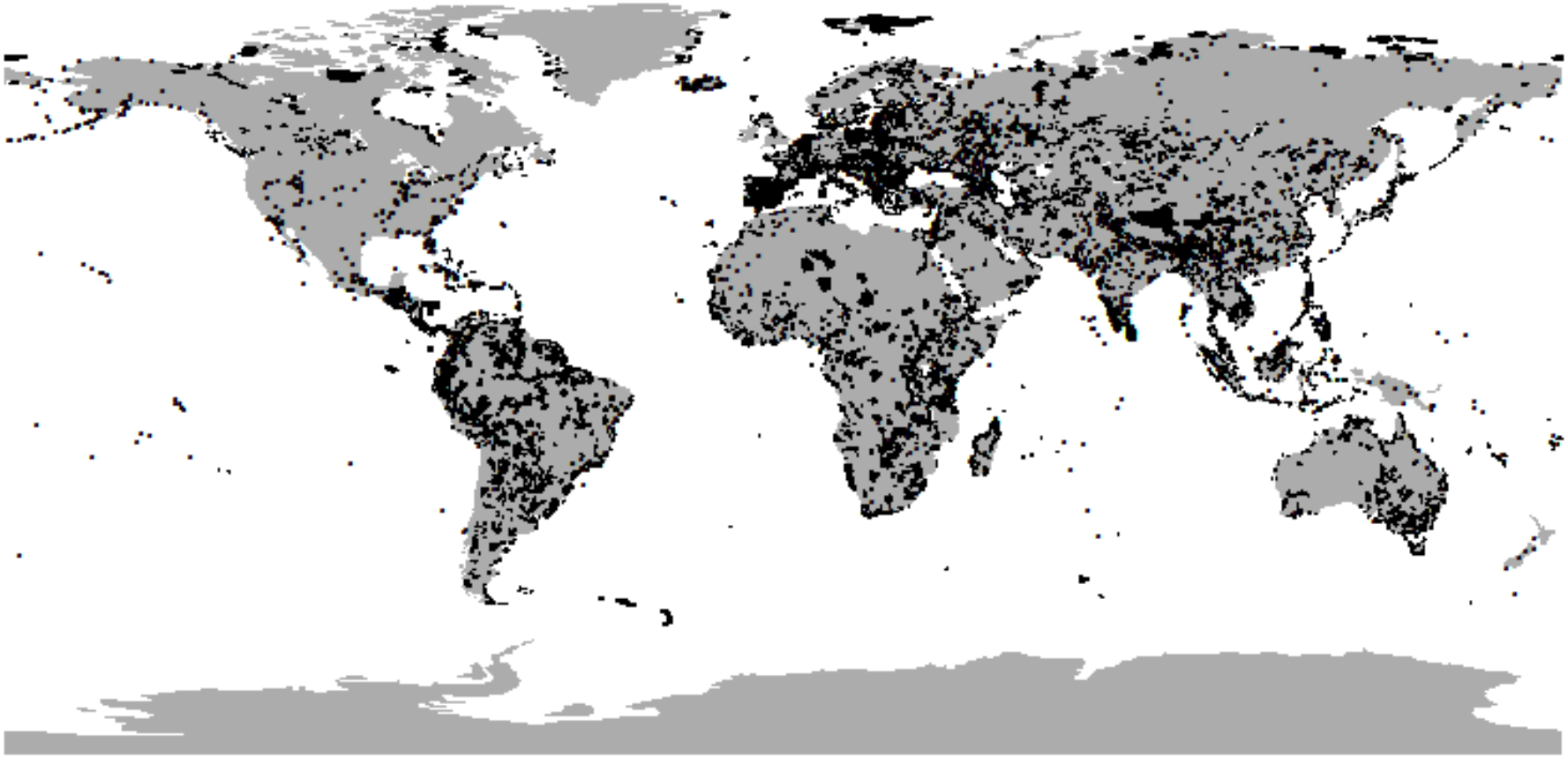
Megadiversity Countries

Mittermeier, R.A., Robles-Gil, P., Mittermeier, C.G. (Eds) 1997. Megadiversity. Earth's Biologically Wealthiest Nations. CEMEX/Agrupaciaon Sierra Madre, Mexico City.

Biodiversity HotSpots

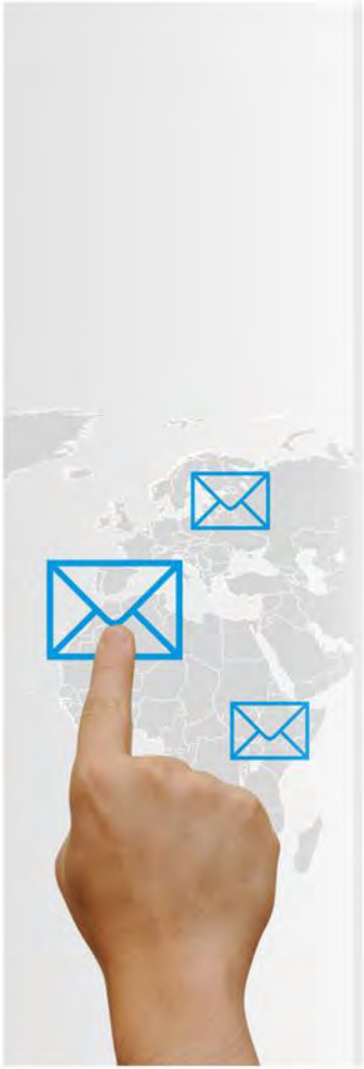


Key Biodiversity Areas



Key Biodiversity Areas

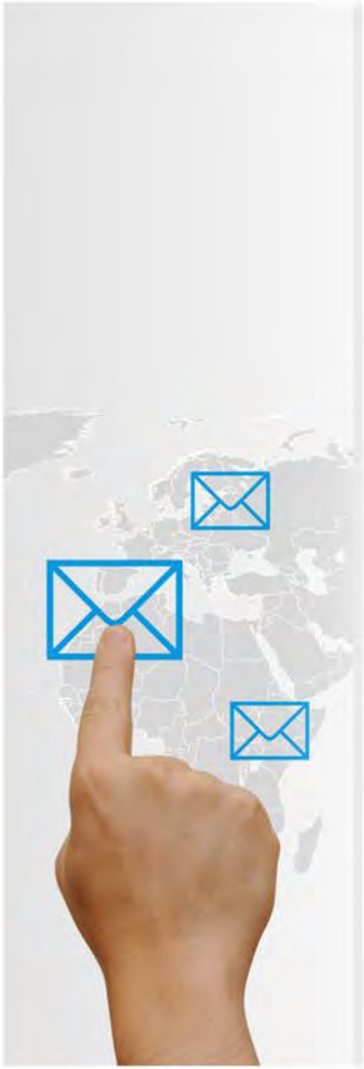
The International Union for the Conservation of Nature (IUCN),



Importance of a KBA process

- Identifying areas critical to the conservation of biodiversity identifies as one form of intervention to help the government and stakeholders **prioritize conservation action and devise geographically specific strategies**

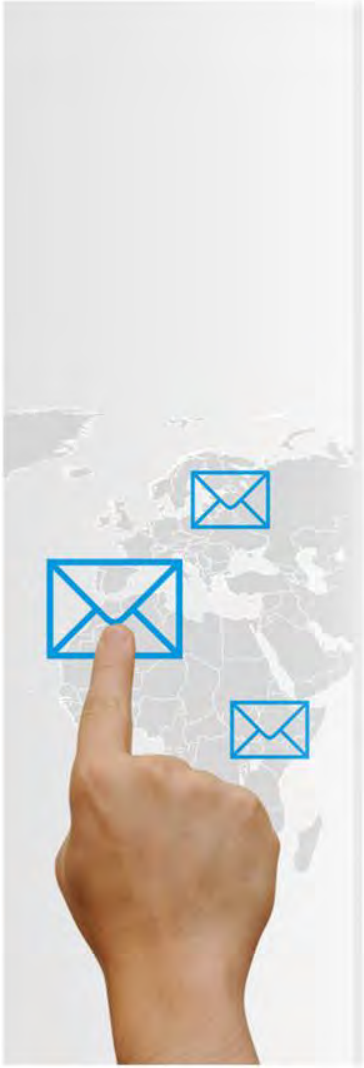
- KBAs are **defined** to achieve site boundaries that are biologically relevant yet practical for management, even if no specific management prescription is implied by the delineation of KBA boundaries (for example, not all KBAs will be, nor should be, formal protected areas).



Importance of a KBA process

- Inform **delineation processes** that would curb the expansion of extractive activities such as mining, fishing, etc. Delineation is an iterative process that involves:
  - assembly of spatial datasets,
  - derivation of initial site boundaries based on biological data, refinement of the biological map to yield practical boundaries,
  - consultation of all key stakeholders, and the
  - documenting of the level of confidence in the delineation.

- Facilitate compliance to and aid in **monitoring the progress** of conservation action vis a vis Aichi Targets and other commitments (MEAs)

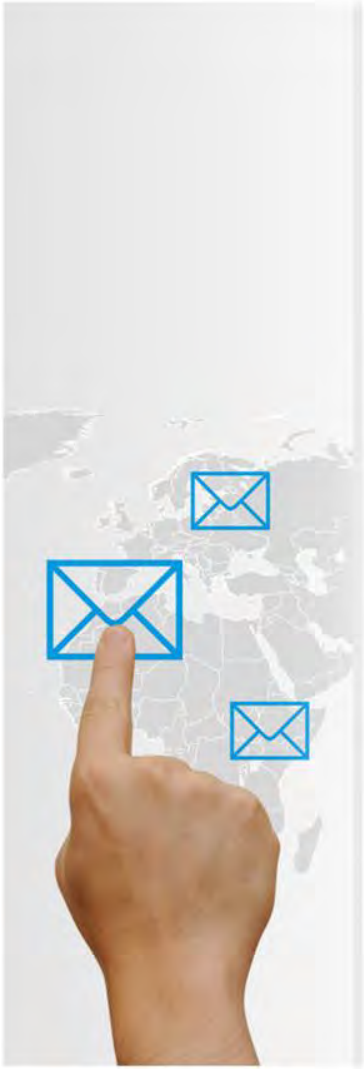


The KBA Process… updated

- “The KBA Standard provides an **overarching framework** to harmonize existing approaches to identify important sites for biodiversity.

- It builds on more than 30 years of experience in identifying sites for different taxonomic, ecological or thematic subsets of biodiversity, in particular Important Bird and Biodiversity Areas, but also Important Plant Areas, Alliance for Zero Extinction sites, and Key Biodiversity Areas in freshwater, marine and terrestrial systems identified under previously published criteria.

- The KBA Standard also supports the identification of additional sites important for components of biodiversity not addressed by existing approaches. “



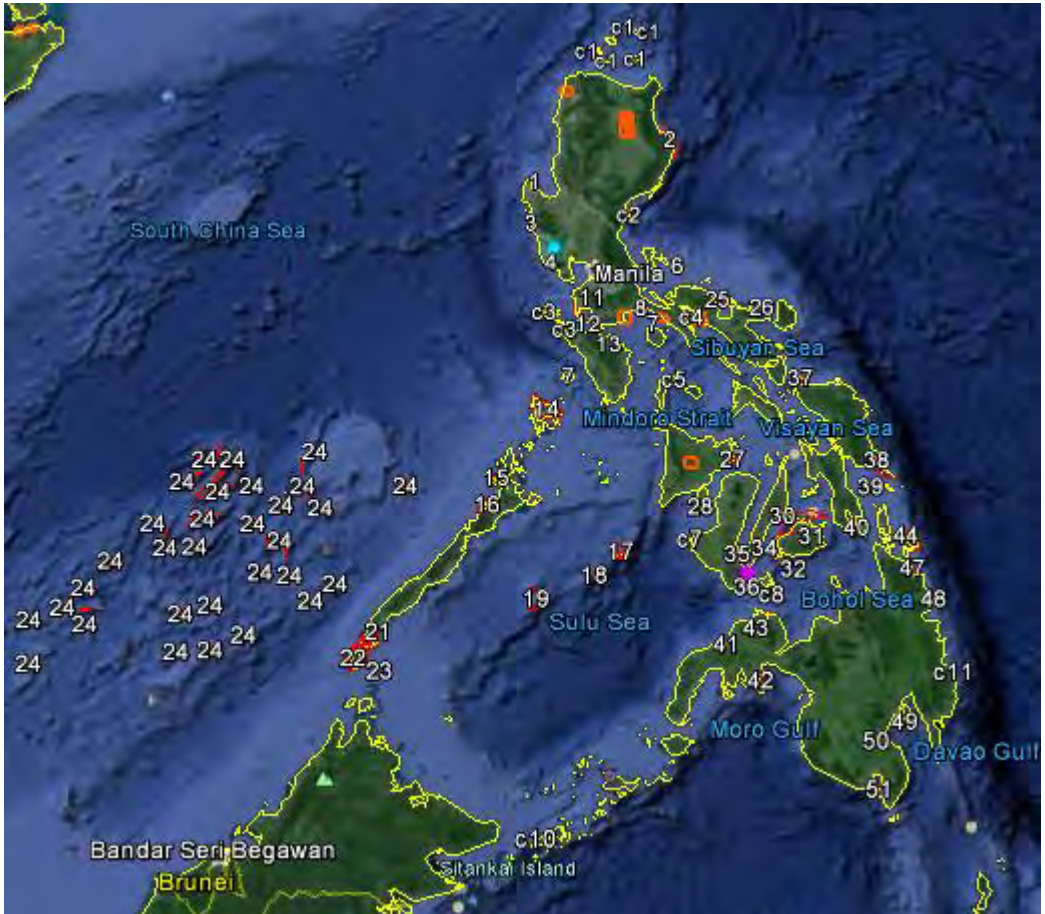
Data for the Updated KBA Process

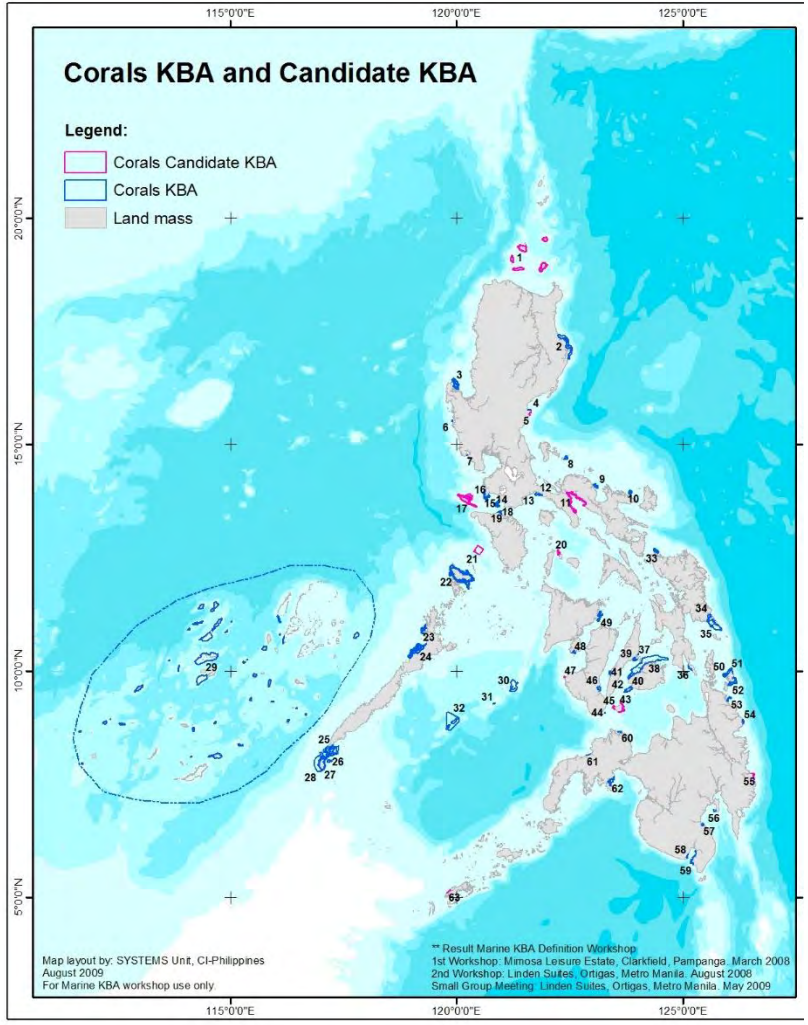
- **Threatened Biodiversity:** Threatened taxa, Threatened Habitats
- **Geographically restricted biodiversity,** endemism, biome restricted assemblages, Geographically restricted ecosystem types
- **Outstanding ecological Integrity**
- **Biological processes**
  - Demographic aggregations
  - Refugia
  - Source Populations
- **Biodiversity through quantitative analysis**
  - irreplaceability

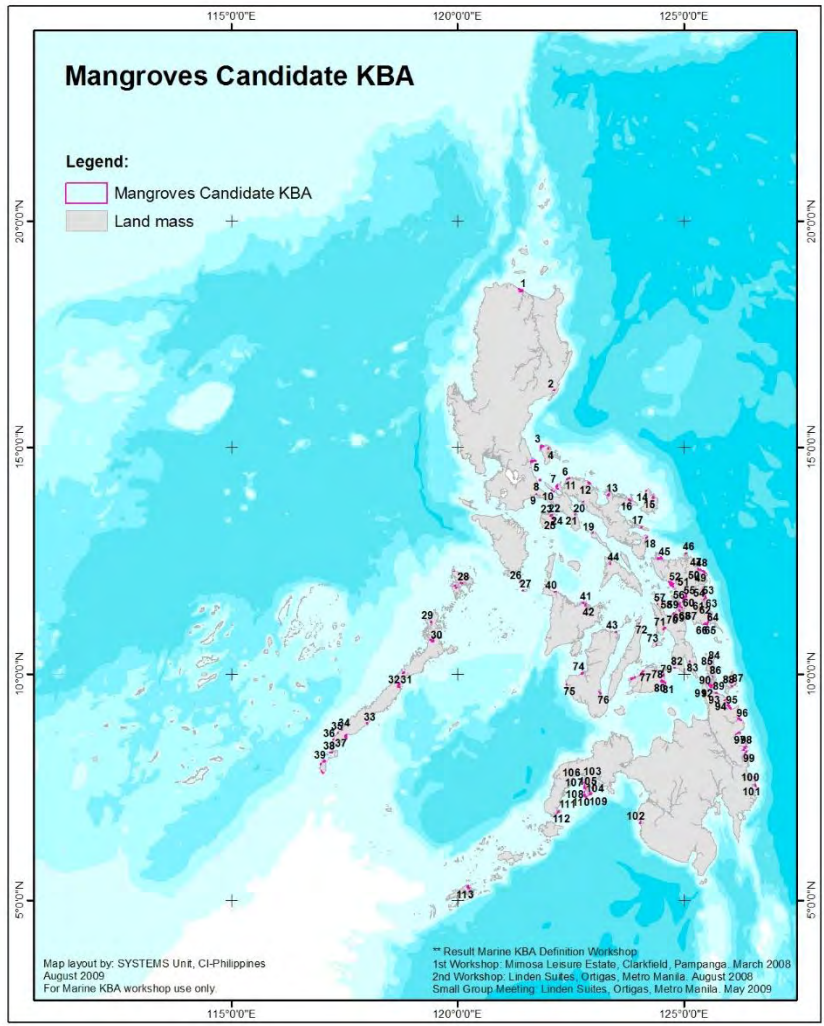
Sample Data Set: Corals

ID	Name	Location					Estimated Area (has)	Trigger species
		Region	Province	Municipality	Long	Lat		
				MARINE KBAs				
1	Bolinao Peninsula	I	Pangasinan	Bolinao, Anda	119.979015	16.354908	13937.75	*Goniastrea deformis* (VU) *Nemenzophyllia turbida* (VU) *Euphyllia paraancora* (VU) *Euphyllia divisa* (VU) - type locality *Pavona cactus* (VU) ~~*Acropora caroliniana* (VU)~~ *Porites eridani* (EN) ~~*Acanthastrea hemprichii* (VU)~~
2	Northern Sierra Madre National Park	II	Isabela	Palanan, Ilagan, Divilacan, Maconacon	122.428786	17.206832	36849.06	*Goniopora albiconus* (VU); *Montipora vietnamensis* (VU); *Seriatopora aculeata* (VU)
3	Salvador Island	III	Zambales	Masinloc	119.901385	15.520949	323.89	*Turbinaria peltata* (VU) *Galaxea astreata* (VU)
4	Grande Island	III	Zambales	Subic	120.226868	14.767786	148.94	*Cataphyllia jardinei* (VU)
5	Baler	III	Aurora	Baler	121.603417	15.759978	583.24	~~*Pavona decussata* (VU)~~
6	Jomalig Island	IV	Quezon	Burdeos	122.417733	14.698865	2731.51	*Hydnophora bonsai* (EN)
7	Padre Burgos	IV	Quezon	Padre Burgos	121.845200	13.888058	1732.91	~~*Goniopora burgosi* (VU)~~
8	Pagbilao	IV	Quezon	Pagbilao	121.750279	13.905579	1023.95	*Cataphyllia jardinei* (VU)
9	Mabini	IV	Batangas	Mabini	120.890781	13.715815	525.24	*Alveopora excelsa* (EN) *Alveopora minuta* (EN)

Sample Map: Corals




Corals KBA and Candidate KBA
Legend:
Corals Candidate KBA
Corals KBA
Land mass
115°0'0"E
120°0'0"E
125°0'0"E
20°0'0"N
15°0'0"N
10°0'0"N
5°0'0"N
Map layout by: SYSTEMS Unit, CI-Philippines
August 2009
For Marine KBA workshop use only.
** Result Marine KBA Definition Workshop
1st Workshop: Mimosa Leisure Estate, Clarkfield, Pampanga. March 2008
2nd Workshop: Linden Suites, Ortigas, Metro Manila. August 2008
Small Group Meeting: Linden Suites, Ortigas, Metro Manila. May 2009


Mangroves Candidate KBA
Legend:
Mangroves Candidate KBA
Land mass
115°0'0"E
120°0'0"E
125°0'0"E
20°0'0"N
15°0'0"N
10°0'0"N
5°0'0"N
Map layout by: SYSTEMS Unit, CI-Philippines
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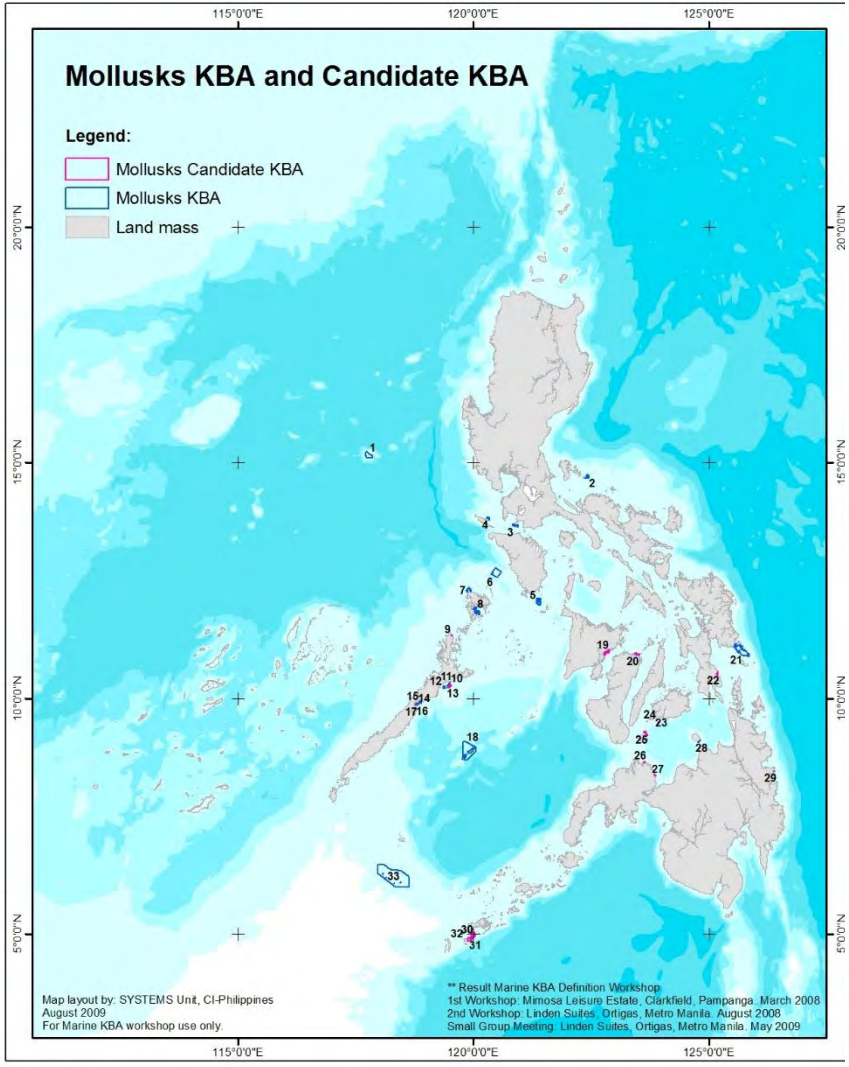
Mollusks KBA and Candidate KBA
Legend:
Mollusks Candidate KBA
Mollusks KBA
Land mass
115°0'0"E
120°0'0"E
125°0'0"E
20°0'0"N
15°0'0"N
10°0'0"N
5°0'0"N
Map layout by: SYSTEMS Unit, CI-Philippines
August 2009
For Marine KBA workshop use only.
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1st Workshop: Mimosa Leisure Estate, Clarkfield, Pampanga. March 2008
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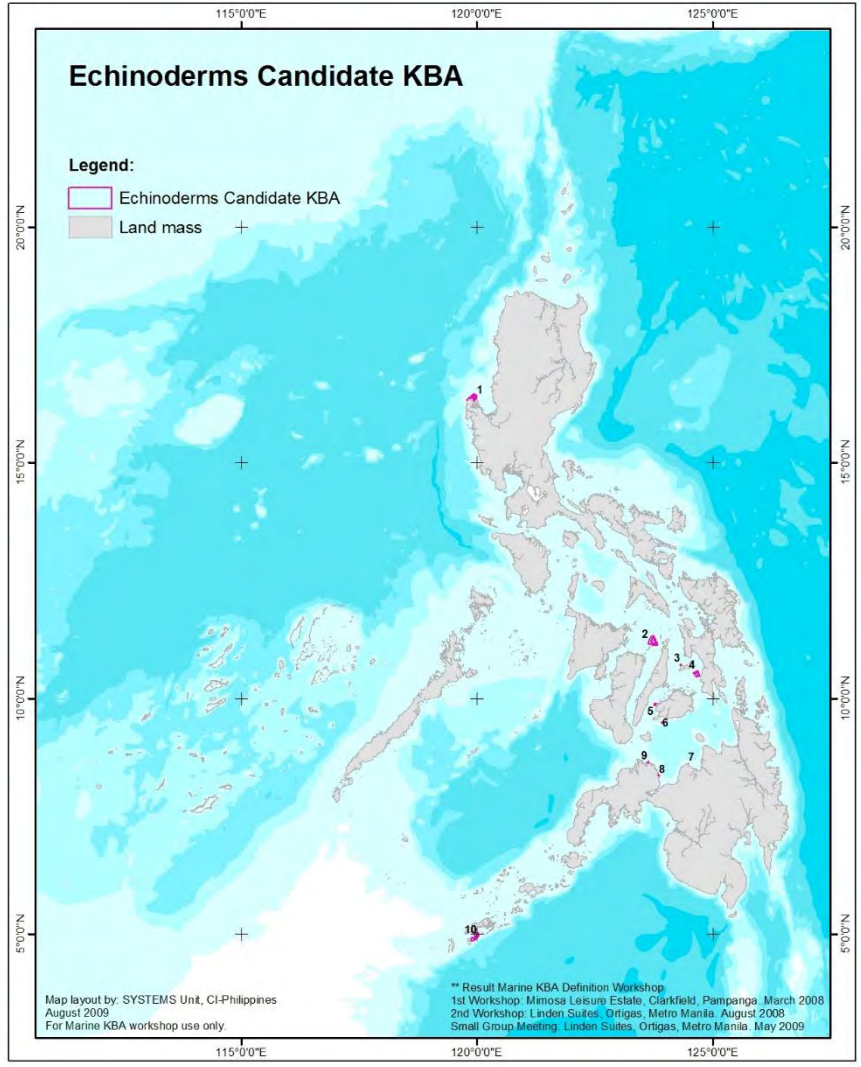
Small Group Meeting: Linden Suites, Ortigas, Metro Manila. May 2009


Echinoderms Candidate KBA
Legend:
Echinoderms Candidate KBA
Land mass
115°0'0"E
120°0'0"E
125°0'0"E
20°0'0"N
15°0'0"N
10°0'0"N
5°0'0"N
Map layout by: SYSTEMS Unit, CI-Philippines
August 2009
For Marine KBA workshop use only.
** Result Marine KBA Definition Workshop
1st Workshop: Mimosa Leisure Estate, Clarkfield, Pampanga. March 2008
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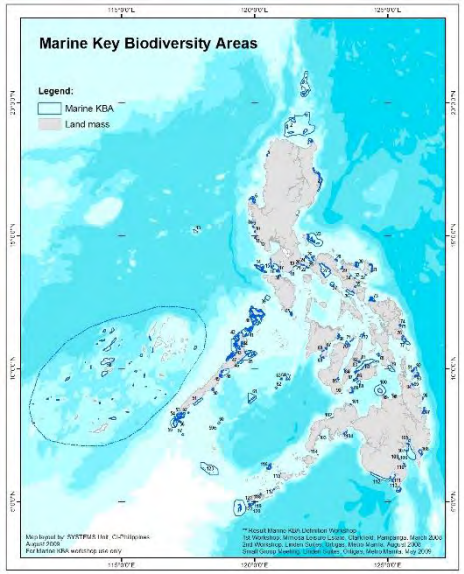
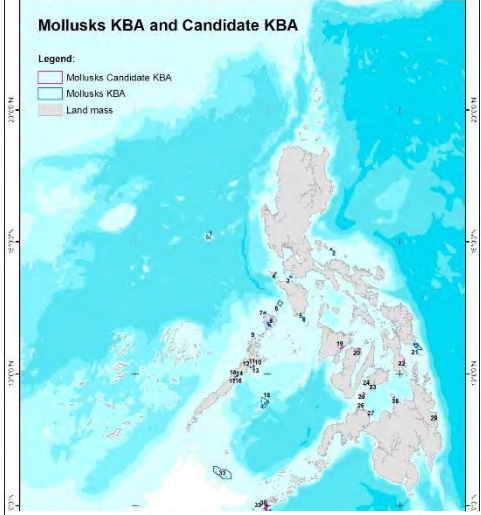
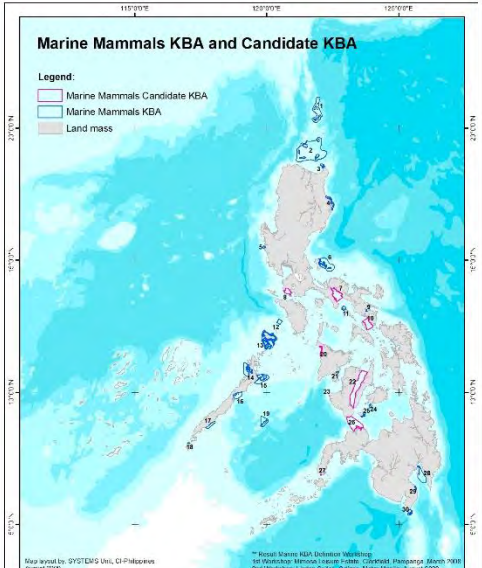
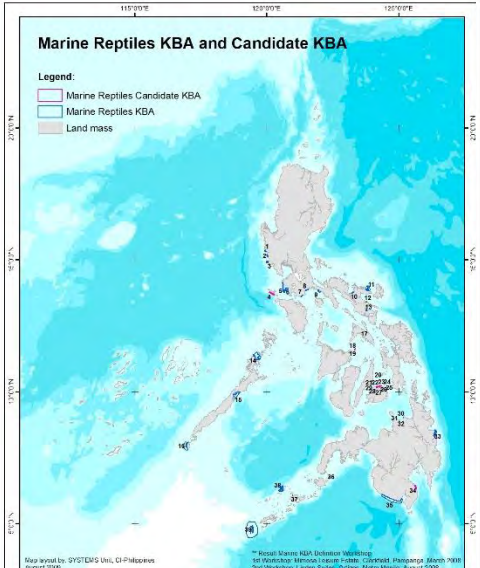
Small Group Meeting: Linden Suites, Ortigas, Metro Manila. May 2009

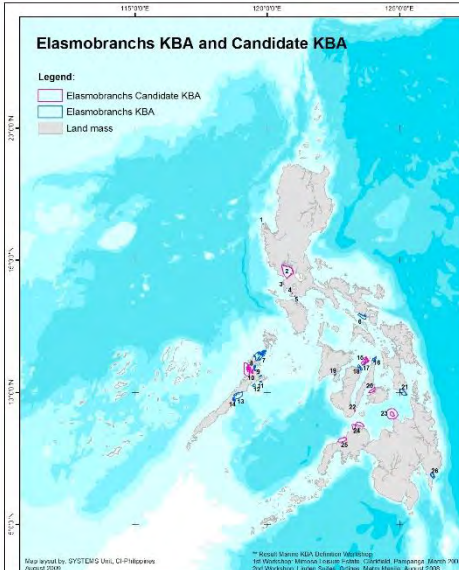
Other data sources

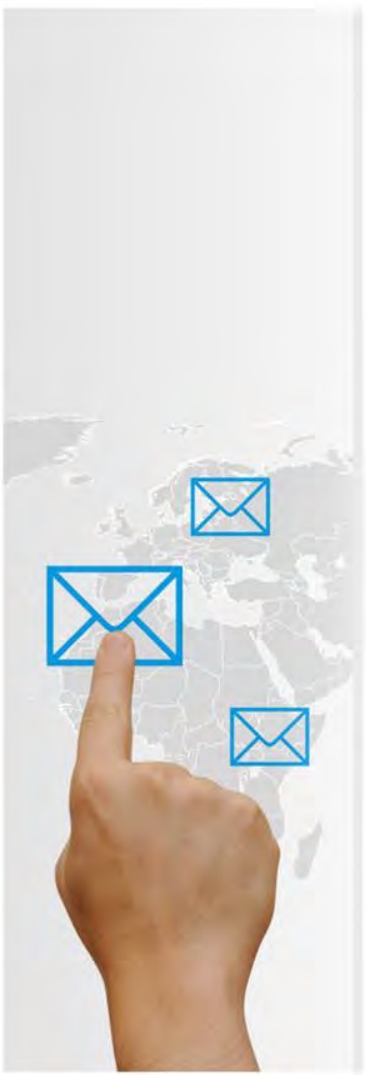


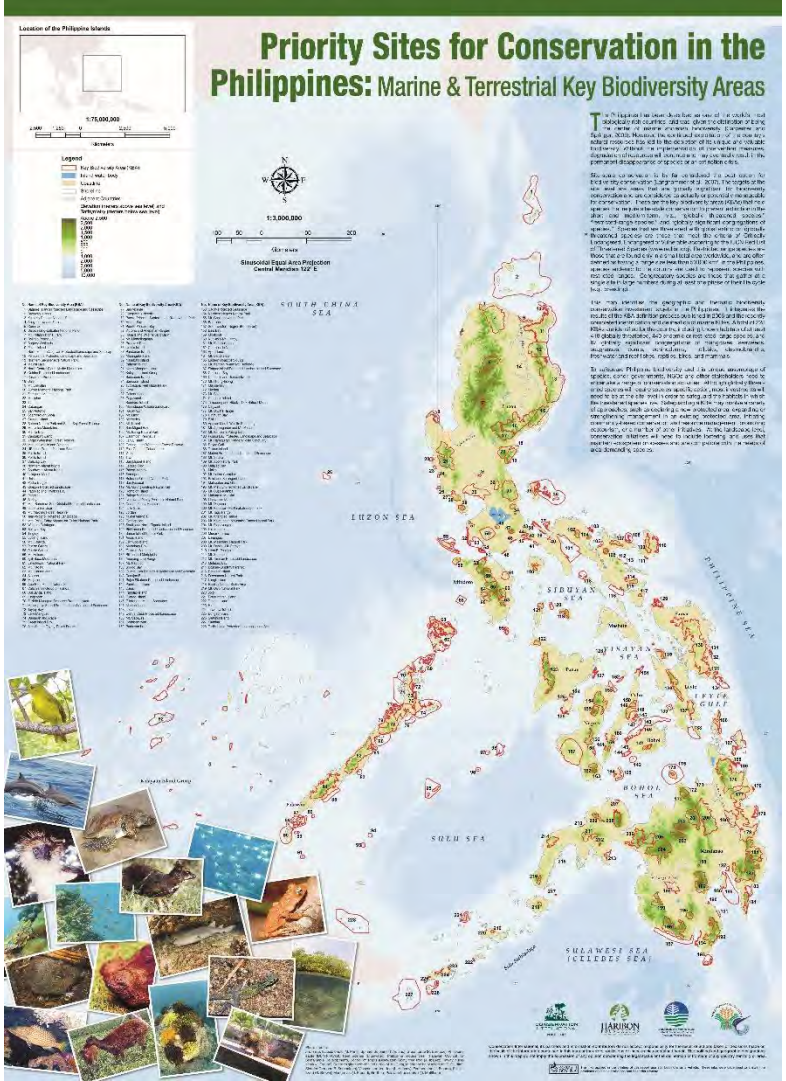


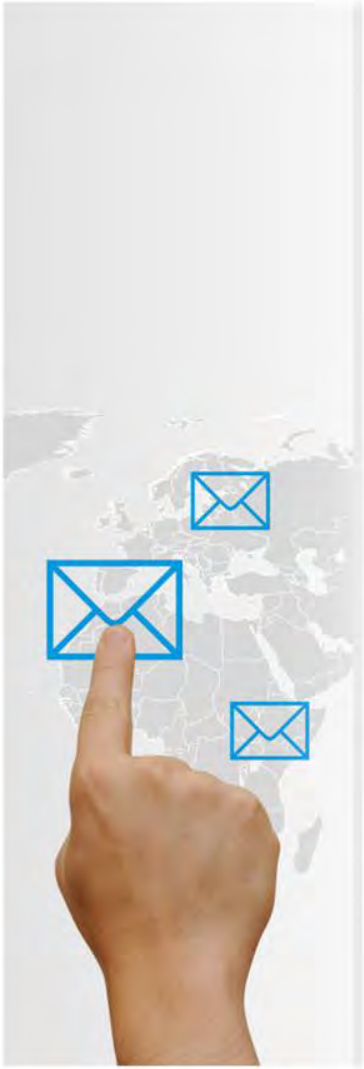




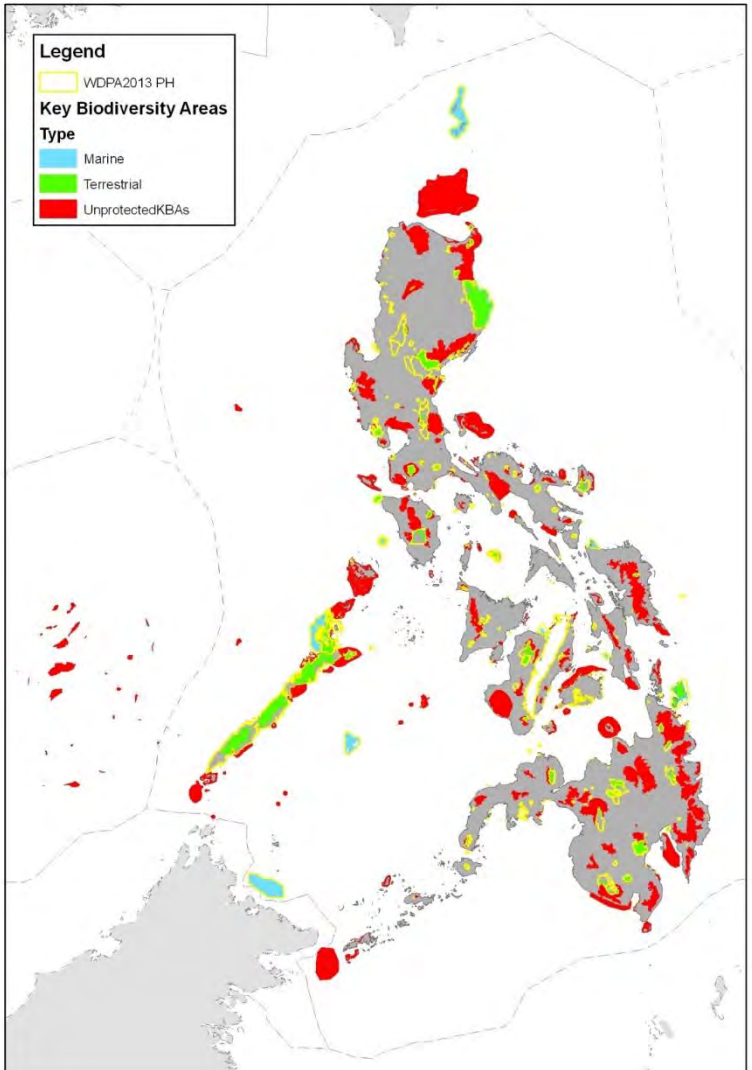





Priority Sites for Conservation in the Philippines: Marine & Terrestrial Key Biodiversity Areas
Location of the Philippine Islands
1:3,000,000
Simusoidal Equal Area Projection
Central Meridian 122° E
SOUTH CHINA SEA
LUZON SEA
SIBUYAN SEA
VISAYAN SEA
LEYTE GULF
BOHOL SEA
SULU SEA
SULAWESI SEA (CELEBES SEA)



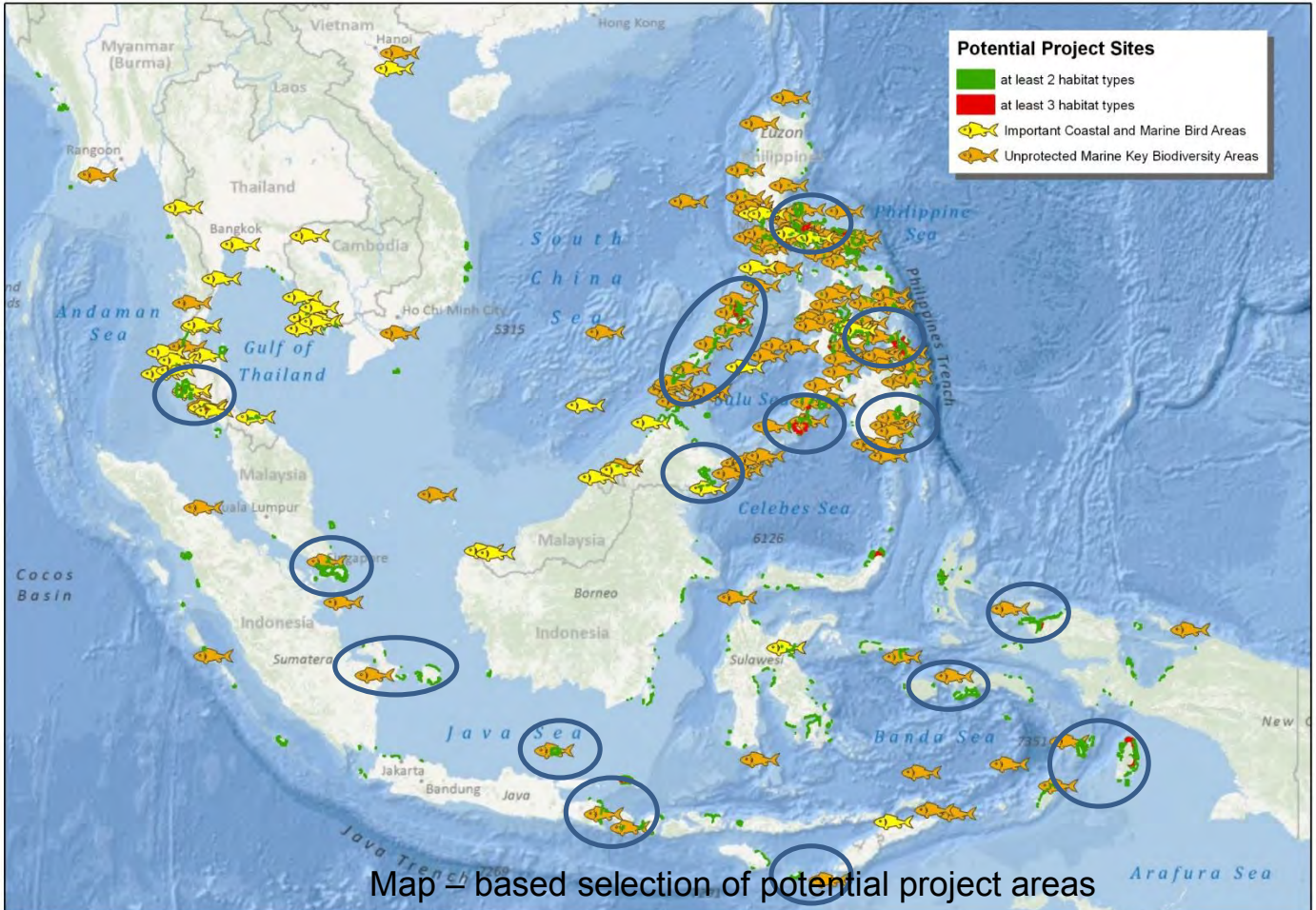
Uses of KBAs



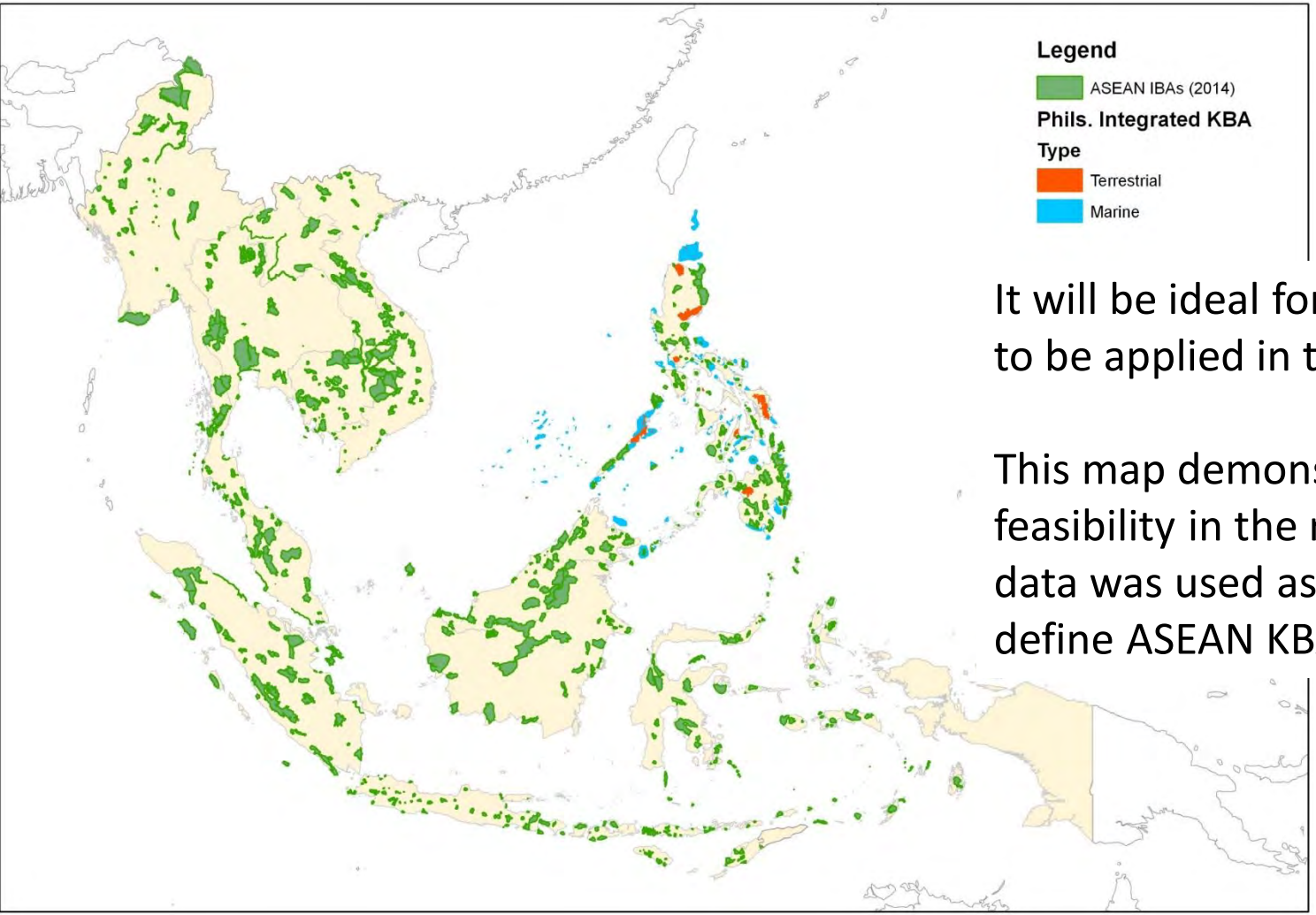
KBAs in PA identification: Example: Philippines

- Vulnerability, Irreplaceability criteria used
- Cost effective first cut in identifying sites critical to ridge to reef biodiversity conservation in the Philippines
- Next steps
  - Social and economic perception mapping
  - Ground truthing of developments and community validation
  - PA mapping, plan preparation, and related delineation and legal processes for KBAs needing protection

KBAs in Project Sites identification: Example: ICM Sites in the ASEAN



Map – based selection of potential project areas



It will be ideal for the KBA process to be applied in the rest of Asia

This map demonstrates its feasibility in the region where IBA data was used as surrogate to define ASEAN KBAs.

Thank You!!

Annex 22- List of Abbreviations

NBDS	National Biodiversity Databasse Sysytem
JICA	Japan International Cooperation Agency
IPT	Integrated Publishing Toolkit
BIFA	Biodiversity Fund For Asia
GBIF	Global Biodiversity Information Facility
IPNI	International Plant Name Index
ABCDnet	Asia Biodiversity Conservation and Database Network
ASEAN	Association of South East Asian Nation
NHCs	National Historical Collections
SP	Strategic Plan
TaiBIF	Taiwan Biodiversity Information Facility
PhilBIF	Philippine Biodiversity Information Facility
JBIF	Japan Biodiversity Information Facility
KBA	Key Biiodiversity Area
ACB	ASEAN Center for Biodiversity
BIC	Biodiversity Informatics Cookbook
BMB	Biodiversity Management Bureau
PBSAP	Philippine Biodiversity Strategy and Action Plan
DwC	Darwin Core
Phil CHM	Philippine Clearing House Mechanism
PhiBIS	Phil Biodiversity Info System
ICIMOD	International Centre for Integrated Mountain Development
MSU	Mindanao State University