



Biodiversity Indonesia

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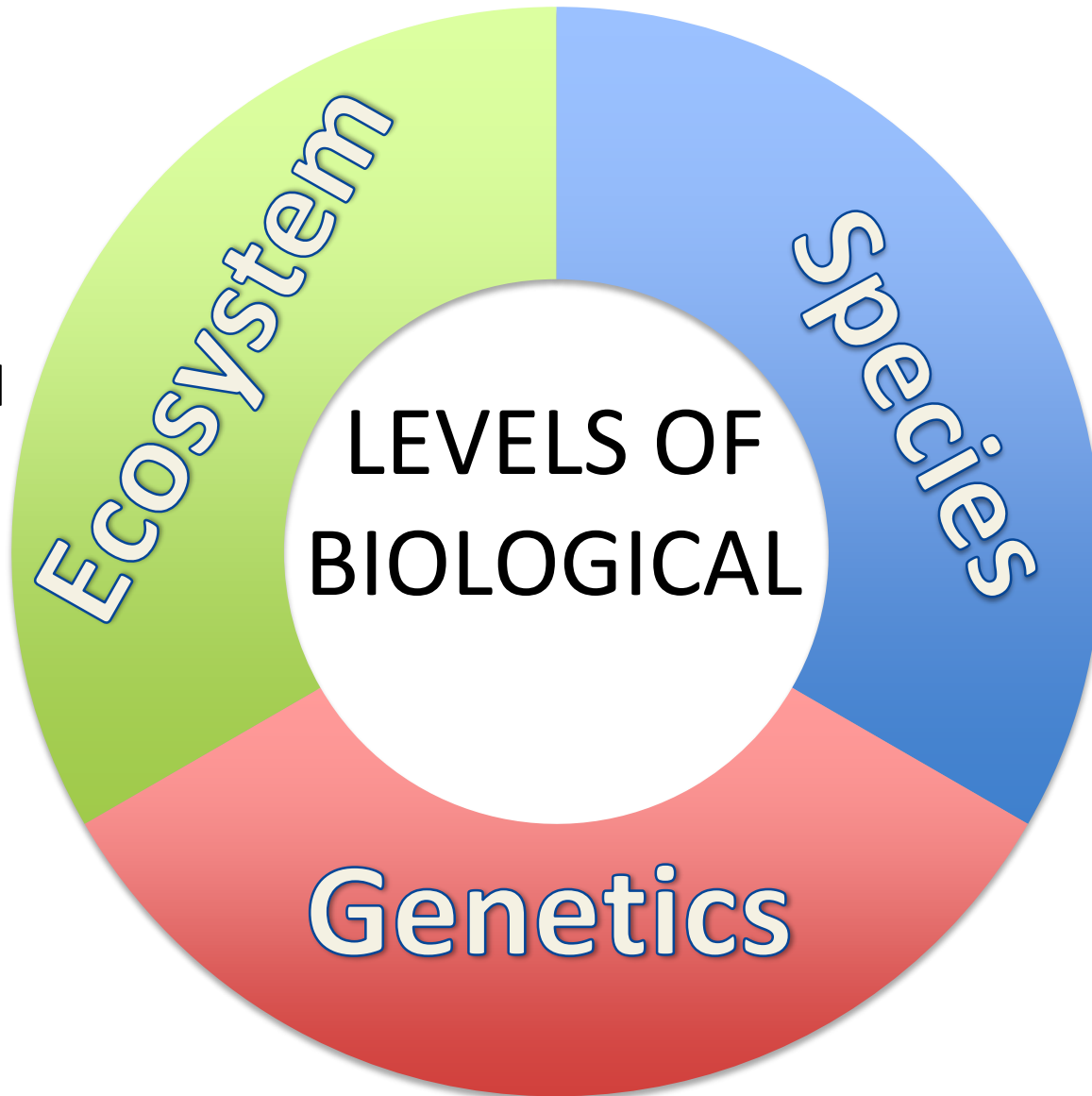
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- Natural
- Artificial



- Terrestrial
- Marine

- Animals
- Plants
- Microbes

Laws on Biodiversity

- UU No 5/1990

Conservation of Biodiversity and Ecosystems

- UU No 5/1994

United Nations Convention on Biological Diversity

- UU No 21/2004

Cartagena Protocol on Biosafety To The Convention on Biological Diversity

- UU No 11/2013

Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity

1993

*Biodiversity Action Plan
for Indonesia (BAPI)*

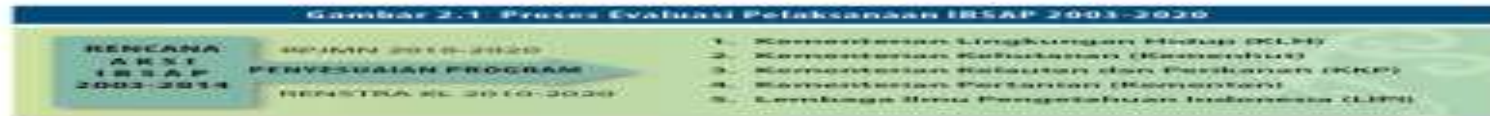
Ratification UN CBD

2003

*Indonesian Biodiversity
Strategy and Action
Plan (IBSAP) 2003-2020*

*Biodiversity Action Plan 2020,
Aichi Target, Access and Benefit
Sharing (ABS), LIPI (2014), COP
CBD 10 Nagoya*





Tujuannya adalah memetakan kesesuaian dan pelaksanaan program IBSAP 2003-2020.

Dokumen utama yang digunakan dalam kajian ini, ialah dokumen Rencana Pembangunan Jangka Menengah (RPJMN) 2010-2014, dan 5 (lima) Rencana Strategis (RENSTRA) Kementerian/Lembaga (K/L) tahun 2010-2014. Kelima K/L tersebut, yaitu Kementerian Lingkungan Hidup (KLH), Kementerian Kesehatan (Kemenkes), Kementerian Kelautan dan Perikanan (KKP), Kementerian Pertanian (Kementan), dan Lembaga Ilmu Pengetahuan Indonesia (LIPI).

Hasil kajian Komen PPN/BAPPENAS (2012), menyebutkan hanya 37 (26%) dari program kegiatan RPJMN 2010-2014 yang sesuai dengan program kegiatan atau target di dalam IBSAP. Padahal dalam dokumen IBSAP 2003-2020 disebutkan terdapat 5 (lima) rencana aksi yang terdiri atas 72 program kegiatan yang akan dicapai sampai tahun 2020.

Khusus dalam Bidang Sumber Daya Alam dan Lingkungan Hidup (SDALH) serta Ilmu Pengetahuan dan Teknologi (IPTEK) dalam RPJMN 2010-2014 diketahui ada 4 (empat)



RENCANA AKSI IBSAP 2003-2020

(BAPPENAS, 2016)

- KLHK : Focal Point biodiversity
- LIPI : National Custodian biodiversity database
- BAPPENAS: mainstreaming biodiversity to national planning
- Others: policy implementation

Gambar 2.3 Hasil Analisis Kesesuaian Program RPJMN 2010-2014, RENSTRA K/L dengan Program IBSAP 2003 - 2020



kualitas pelayanan karantina pertanian dan pengawasan keamanan hayati; penelitian/analisis sosial ekonomi dan kebijakan pertanian; dan pengembangan sistem perbenihan, pupuk dan sarana produksi lainnya.

5. Renstra LIPI 2010-2014. Dari total 27 program kegiatan yang ditetapkan di dalam Renstra LIPI, sebanyak 4 (15%) program yang sesuai dengan program kegiatan IBSAP, antara lain: pengembangan kawasan konservasi eks-situ tumbuhan di daerah; penelitian biologi; penelitian bioteknologi; penelitian limnologi (sumber daya perairan darat).

Secara keseluruhan dari hasil evaluasi dan tinjauan ulang dapat disimpulkan bahwa :

1. Adopsi rencana aksi dan program IBSAP 2003-2020 belum secara optimal dilaksanakan sesuai dengan yang ditetap-



Biodiversity

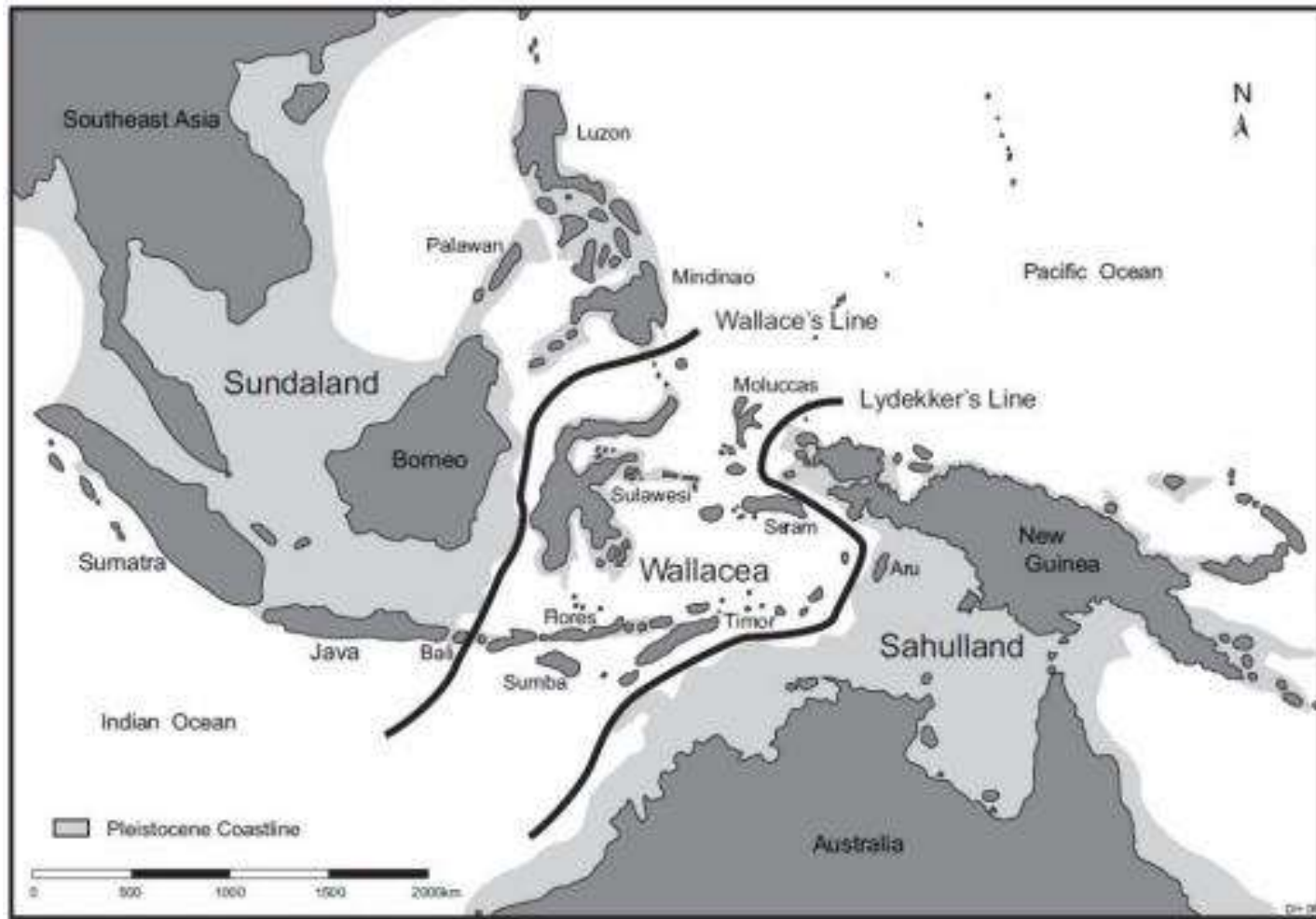


Habitat
loss

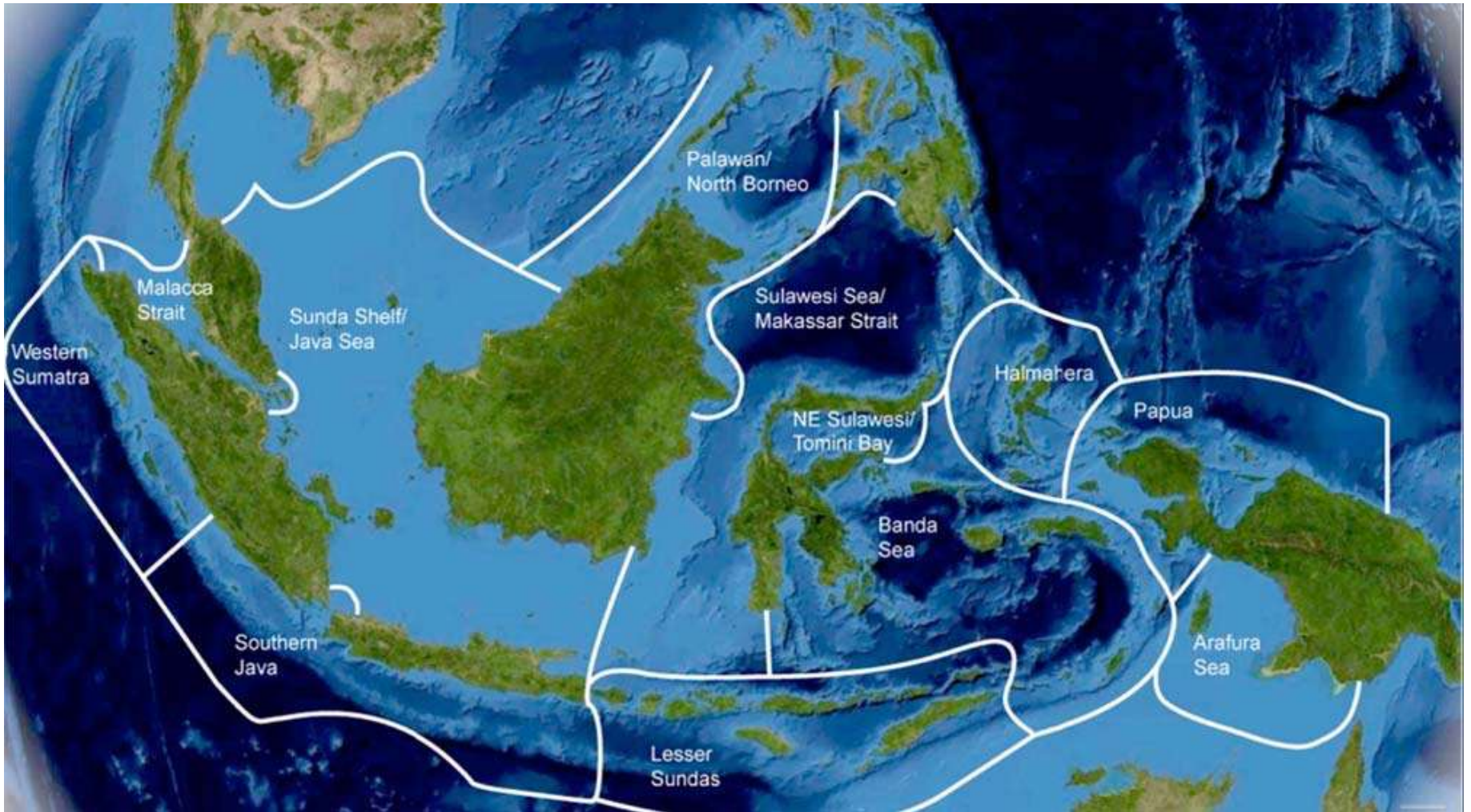


C_n
 H_n
 NH_3
 CO_2
 HCl
 HF
 NO_x
 SO_2
dust

Climate
change



Faunal and floral regions of Indonesia



12 Indonesian marine ecoregions

(source: Huffard, C. L. , M. V. Erdmann, T. R. P. Gunawan (Eds), 2012)

Indonesia accounts for about **10%** of the world's remaining forests and **15%** of the world's coral reefs

Indonesia's biodiversity is home to 25% of all fish species, 17% of birds, 16% of reptiles and amphibians, 12% of mammals and 10% of plants

(source: Rhee et al, 2004)

Habitat loss and degradation

1.5
million ha/year (1985-1997)

2.4
million ha/year (2003-2004)

5 million ha forest fires 97-98

60% rainforest species threatened

60%
Coral reef degraded



Overexploitation

Local extinction

Medicinal and specialist-food markets in Asia.

Rapid development

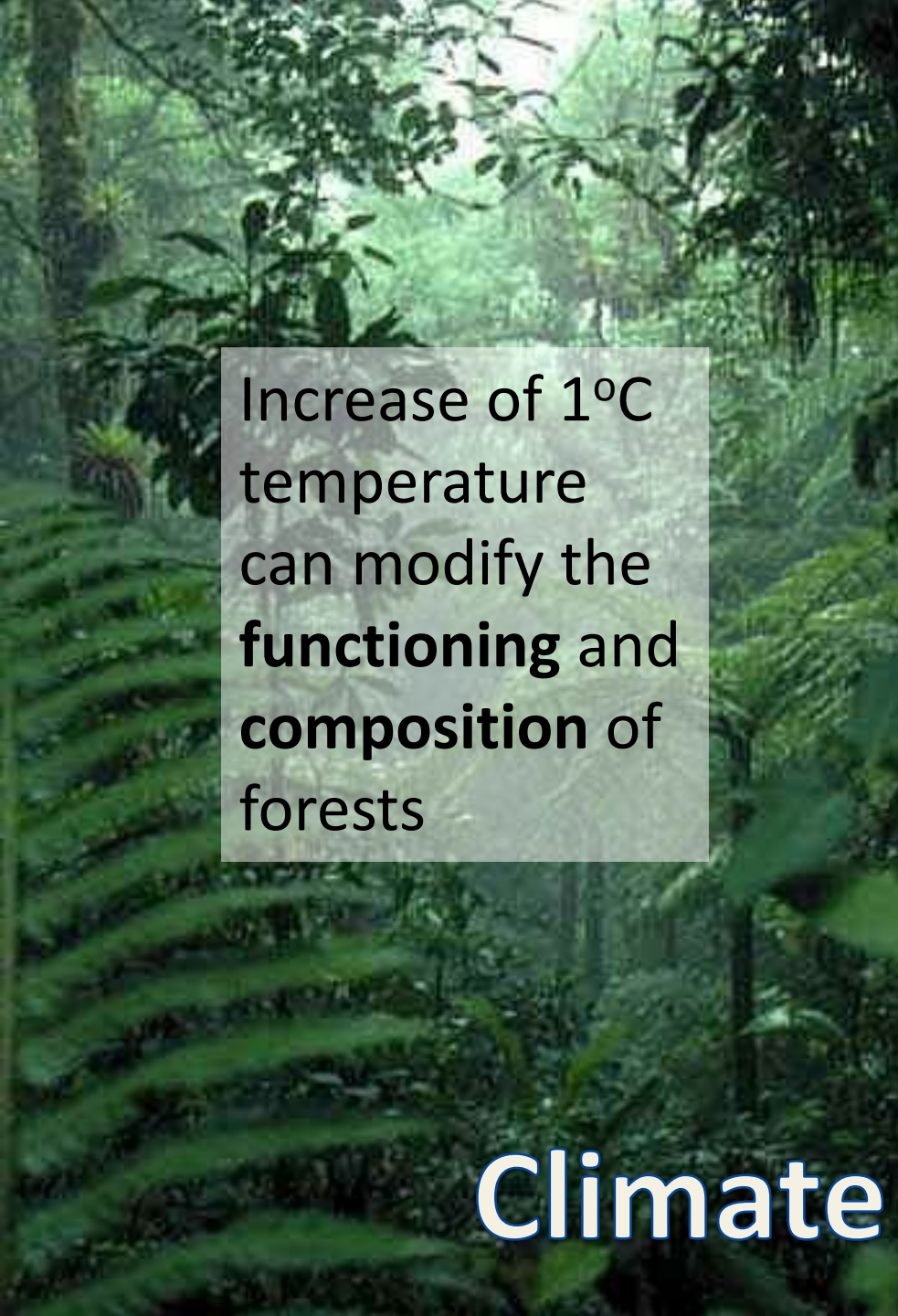
Increasing impoverished poor communities

Number of Indonesia critically endangered, endangered and vulnerable species (spp) and total number of species


Taxonomic Group	No. Endangered spp (Noerdjito & Maryanto Nov. 2001)	No. Endangered Spp (Gol Biodiversity Action Plan 1993)	No. Endangered spp (IUCN Redlist 2001 & 2003)	Total No. spp 2001
Mammals	131	27	128(164)	457
Birds	390	9 (126)*	104 (117)	1530
Reptiles	48	12	19 (27)	514
Fish	8	3	60 (NA)	1400
Insects	19	4	- -	250,000?
Molluscs	12	2	-	20,000?
Crustaceans	9	0	-	?
Plants	110	0	184 (NA)	29,375

* More complete list of Collar & Andrew (1988). Interim third edition of IUCN Red Data Book.

(source: Rhee et al, 2004)



Increase of 1°C temperature can modify the **functioning** and **composition** of forests



Increases in SST and changes in water chemistry can cause **coral bleaching** to **coral death**.

Climate change



Change in temperature
can alter turtle
population and their
food source



Rising sea level
can **reduce the**
area of mangrove
forests



CONSERVATION

Offers important opportunities to:

protect biodiversity

adapt and mitigate climate change

provide significant coastal protection

contribute resilience of ecosystems and populations

Structure and extent of Indonesia Protected Areas

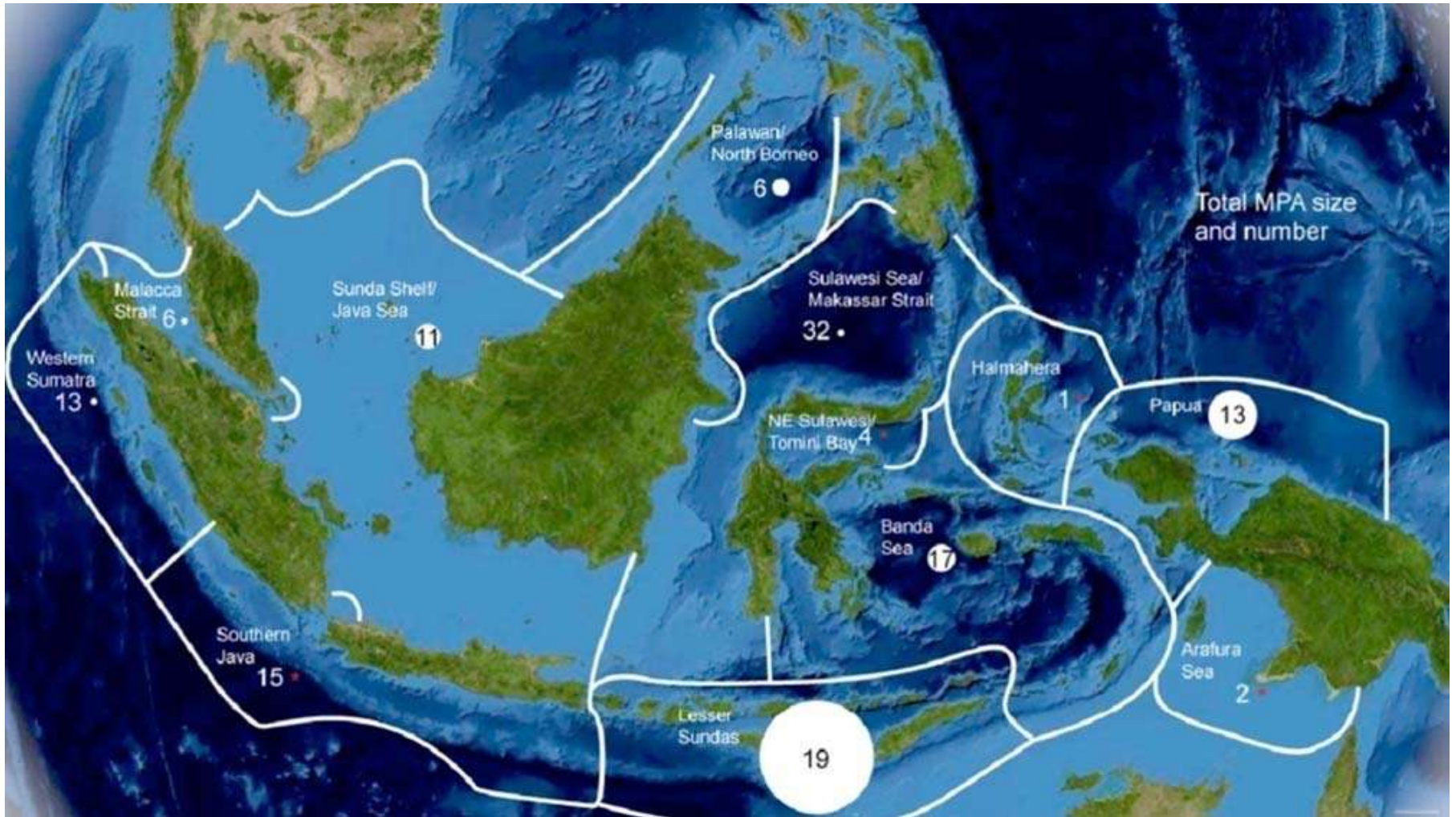
Classification	No. of units	Area (Hectares)	Area (%)
1. Terrestrial Areas			
1.1 National Parks	35	11,291,754.03	61%
1.2 Strict Nature Reserves	173	2,718,565.63	15%
1.3 Nature Recreation Parks	87	283,873.39	2%
1.4 Wildlife Reserves	53	3,548,018.01	19%
1.5 Grand Forest Parks	17	334,336.30	2%
1.6 Hunting Parks	14	222,410.85	1%
Sub-Total	379	18,398,958.21	100%
2. Marine Areas			
2.1 National Parks	6	3,680,936.30	78%
2.2 Strict Nature Reserves	8	211,555.45	4%
2.3 Nature Recreation Parks	18	765,762.00	16%
2.4 Wildlife Reserves	3	65,220.00	1%
Sub-Total	35	4,723,473.75	100%
Combined Totals:			
3.1 National Parks	41	14,972,690.33	65%
3.2 Strict Nature Reserves	181	495,428.84	2%
3.3 Nature Recreation Parks	105	1,049,635.39	5%
3.4 Wildlife Reserves	56	3,613,238.01	16%
3.5 Grand Forest Parks	17	334,336.30	1%
3.6 Hunting Parks	14	222,410.85	1%
Total	414	23,122,431.96	100%

Source: PHKA 2002

Marine Conservation Areas established by
Ministry of Marine Affairs and Fisheries (KKP) and
Ministry of Environment and Forestry (KLHK)

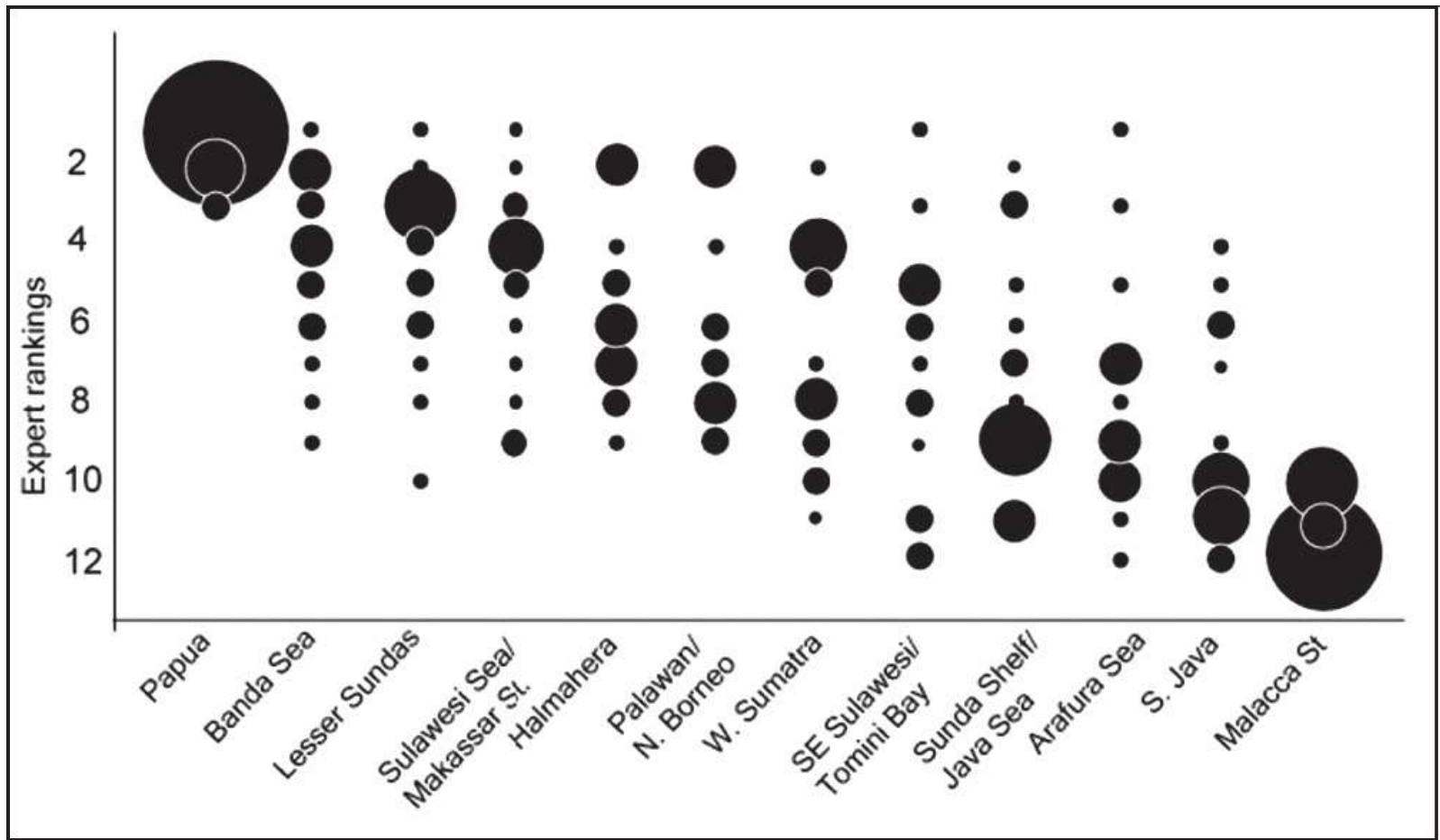
Perkembangan Data Kawasan Konservasi Perairan di Indonesia 2002-2010			
Tahun	KKP	KKH	Total
2003	733.00	5,418,931.55	5,419,664.55
2004	50,496.00	5,418,931.55	5,469,427.55
2005	1,417,889.53	5,418,931.55	6,836,821.08
2006	1,527,682.40	5,418,931.55	6,946,613.95
2007	3,512,019.66	5,418,931.55	8,930,951.21
2008	4,198,602.00	5,418,931.55	9,617,533.55
2009	8,868,634.31	4,694,947.55	13,563,581.86
2010	9,256,413.11	4,694,947.55	13,951,360.66

(source:KKP, 2010)



Number of current MPA and relative MPA coverage per ecoregion

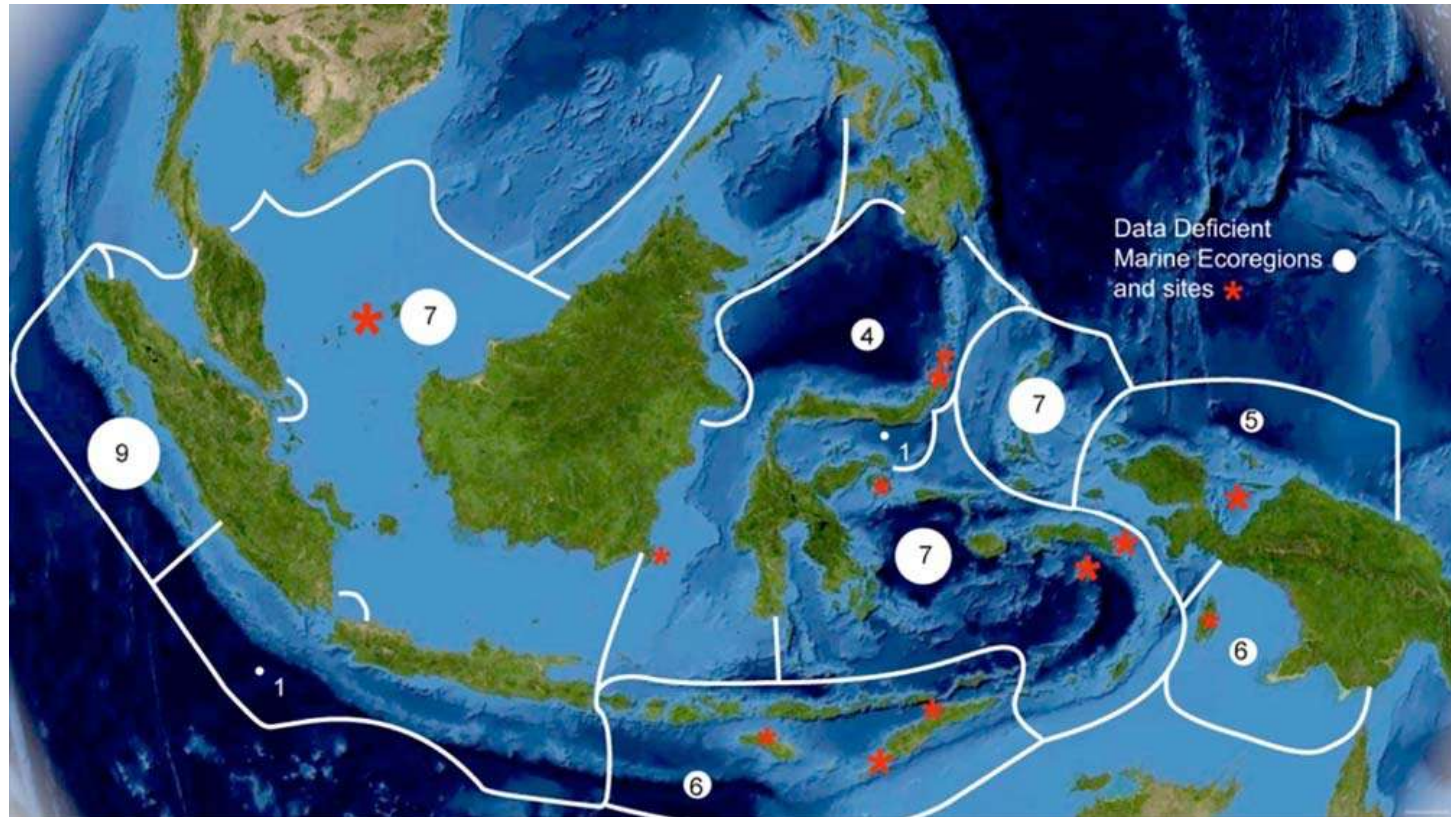
(source: Huffard, C. L. , M. V. Erdmann, T. R. P. Gunawan (Eds), 2012)



Conservation priority for marine ecoregion

(source: Huffard, C. L. , M. V. Erdmann, T. R. P. Gunawan (Eds), 2012)

Information sources and gaps



Biodiversity data deficiency for marine ecoregions

(source: Huffard, C. L. , M. V. Erdmann, T. R. P. Gunawan (Eds), 2012)

Mainstreaming into policy



Biodiversity has been well mainstreamed in conservation objectives (eg. endangered species action plans)

BUT less in restoration/rehabilitation objectives and spatial planning process

	CRITICAL LAND DISTRIBUTION			REHABILITATION PROGRAM DISTRIBUTION			
	Total "Critical" Land (ha)	State Forest % of Critical Land	Non State Forest % of Critical Land	Rehab in State Forest Land (Ha)	Rehab area as % of Critical Land in Forest Area	Rehab in Non State Forest (Ha)	Rehab area as % of Critical Land in Non Forest Area
A	B	C	D	E	E/(B*C)	G	G/(B*D)
SUMATERA	6,341,868	31%	69%	772,124	39%	1,060,134	24%
JAVA	2,066,667	18%	82%	21,505	6%	164,717	10%
BALI & NTT	1,668,880	22%	78%	50,107	14%	69,445	5%
KALIMANTAN	7,178,726	36%	64%	436,851	17%	140,219	3%
SULAWESI	1,922,926	51%	49%	228,432	23%	164,993	17%
MALUKU	694,911	26%	74%	332	0%	492	0%
PAPUA	3,368,903	49%	51%	0	0%	0	0%
TOTAL	23,242,881	35%	65%	1,509,350	19%	1,600,000	11%

Rehabilitation program is a major effort, but not targeting on biodiversity protection and benefits

Mangrove restoration

Targeting in number of seedlings and size of areas

Massive and dense plantation of monospecies

Less sources for products

Not suitable for growth

Focusing on restoring ecosystem functions with positive influence on biodiversity conservation

Human intervention facilitating natural regeneration

Well adapt to environment

More sources for products



Need for new research to develop better assess the value of biodiversity and ecosystem support (healthy ecosystem-resilience)





Terima kasih