

Giam Siak Kecil – Bukit Batu Biosphere Reserve

**A public-private sector initiative
for merging biodiversity conservation
and sustainable use of tropical peat swamp forest**

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Sinar Mas Forestry, Jakarta



Outline

- ❑ Brief about the company
- ❑ Spatial plan of Riau and peatlands
- ❑ Challenges and opportunities
- ❑ UNESCO- MAB approach
- ❑ The GSK-BB Biosphere Reserve
- ❑ Concluding remarks

about us

Sinar Mas Forestry (SMF)

- pulpwood plantation management organization (1 million hectares company-controlled forests)
- exclusive supplier of pulpwood to APP Indonesia

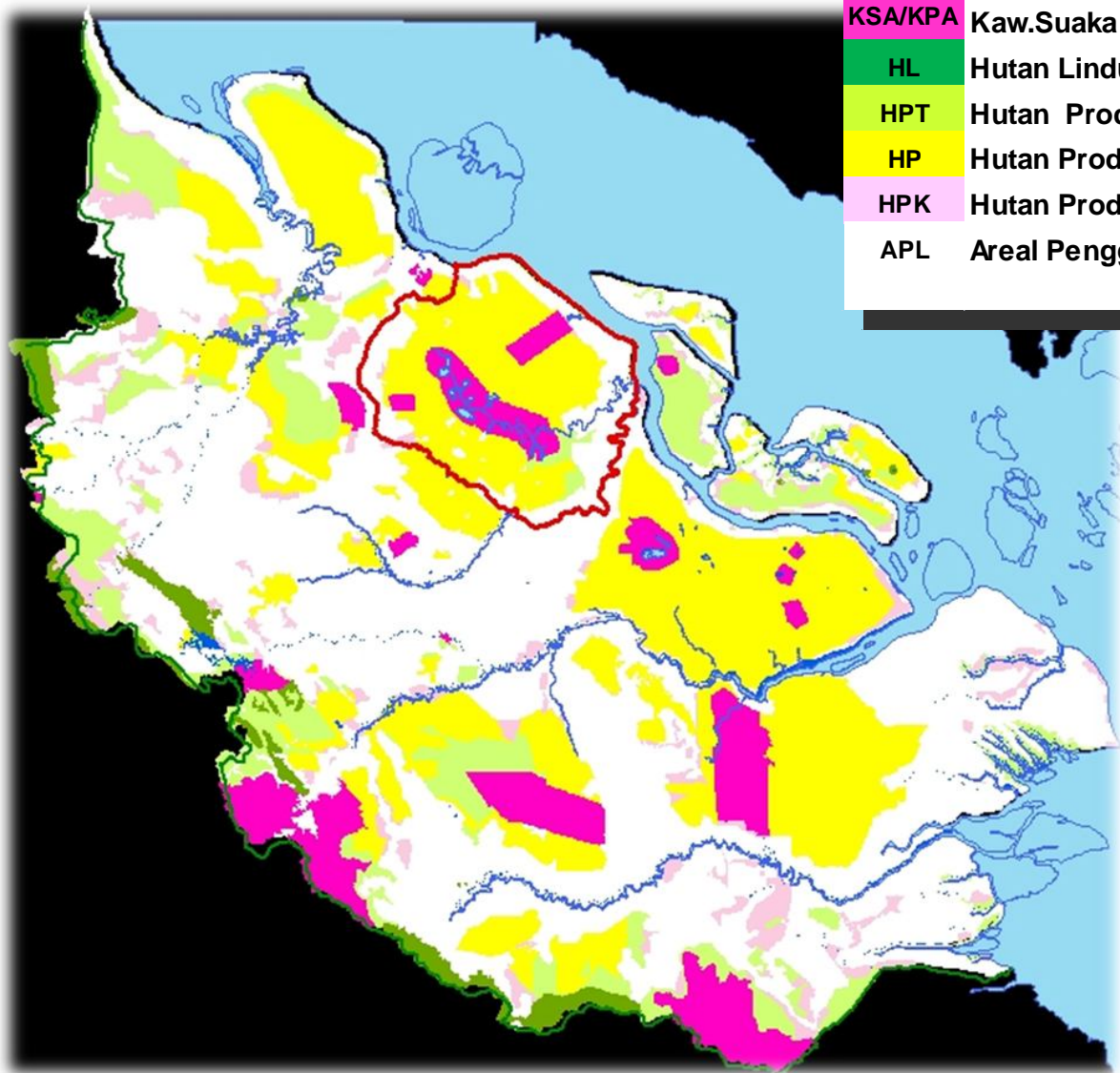
Asia Pulp & Paper (APP)

- major producer of pulp, paper, and paper products e.g. Indah Kiat Pulp & Paper Mills, Lontar Papyrus P&P, Tjiwi Kimia, Pindo Deli, Ekamas Fortuna



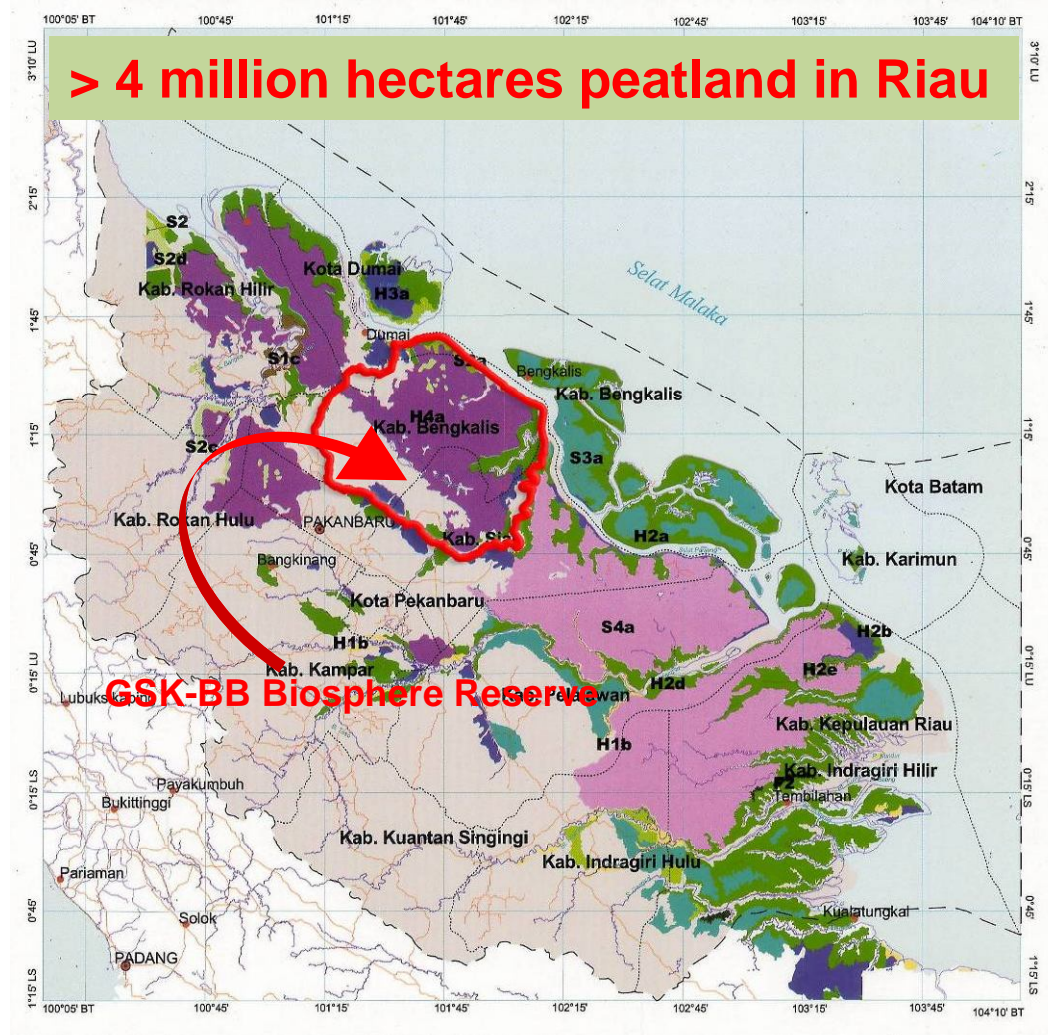
Proposed Spatial Plan of Riau Province

8.9 million ha land surface



KSA/KPA	Kaw.Suaka Alam /Kaw. Pelestarian Alam	625,859	7.0%
HL	Hutan Lindung	234,643	2.6%
HPT	Hutan Produksi Terbatas	891,304	9.9%
HP	Hutan Produksi	2,250,391	25.1%
HPK	Hutan Produksi Konversi	434,946	4.8%
APL	Areal Penggunaan Lain	4,535,629	50.5%
Jumlah		8,972,772	

**Riau –
home to major
pulp and paper
mills in Indonesia**



LEGENDA / LEGEND

Kedalaman/ketebalan Depth/Thickness	Simbol Symbol	Jenis Gambut Peat Types	Luas Area (Ha)	K
Dangkal/Tipis Shallow/Thin 50-100 cm	1	F1 Fibrists/Sapristis	-	-
	2	H1 Hemists	-	-
	3	H1a Hemists/Sapristis	-	-
	4	H1b-e Hemists/Mineral	59,333	-
	5	S1 Sapristis	-	-
	6	S1a Sapristis/Hemists	-	-
	7	S1b-d Sapristis/Mineral	16,861	-
Sedang Moderate 100-200 cm	8	F2 Fibrists/Sapristis	4,070	-
	9	H2 Hemists	-	-
	10	H2a Hemists/Sapristis	1,090,577	-
	11	H2b-e Hemists/Mineral	26,302	-
	12	S2 Sapristis	26,652	-
	13	S2a Sapristis/Hemists	81,603	-
	14	S2b-d Sapristis/Mineral	95,222	-
Dalam/Tebal Deep/Thick 200-400 cm	15	H3 Hemists	-	-
	16	H3a Hemists/Sapristis	203,040	-
	17	S3 Sapristis	1,314	-
	18	S3a Sapristis/Hemists	370,989	-
	19	S3c Sapristis/Mineral	-	-
Sangat Dalam/ Sangat Tebal Very Deep/ Very Thick > 400 cm	20	H4a Hemists/Sapristis	827,419	-
	21	H4e Hemists/Mineral	-	-
	22	S4a Sapristis/Hemists	1,240,218	-
Tanah Mineral Mineral Soil				
Total			4,043,601	

LEGENDA UMUM

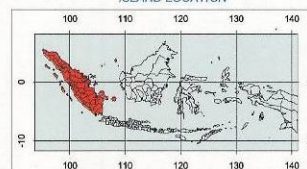
- Ibukota Propinsi
Capital city of the province
- Ibukota Kabupaten
Capital city of the district
- Jalan
Roads
- Batas Propinsi
Province boundary
- Batas Kabupaten
District boundary
- Badan air dan sungai
Waterbody and rivers
- Batas satuan peta
Mapping unit boundary

PETA LUAS SEBARAN LAHAN GAMBUT

MAP OF AREA OF PEATLAND DISTRIBUTION AND CARBON CONTENT



LOKASI PULAU ISLAND LOCATION



PETUNJUK LETAK PETA MAP INDEX



Sumber Data / Source of Data :

- Peta Satuan Lahan dan Tanah Skala 1 : 250.000, Pusat Penelitian Tanah dan Agroklimat, Bogor, 1990.
- Landsat MSS, 1990 dan Landsat TM, 2002.
- Diapositif STAR_1 SAR Skala 1 : 250.000, 1989.

Dibiayai oleh Pemerintah Kanada melalui Canadian International Development Agency (CIDA)
Financial support from the Government of Canada provided through the Canadian International Development Agency (CIDA)



Canadian International
Development Agency

Agence canadienne de
développement international



challenges and opportunities



- ❑ illegal logging, forest encroachments, development pressures, fires & haze pollution, biodiversity loss, rural poverty, etc.

- ❑ institutional arrangement

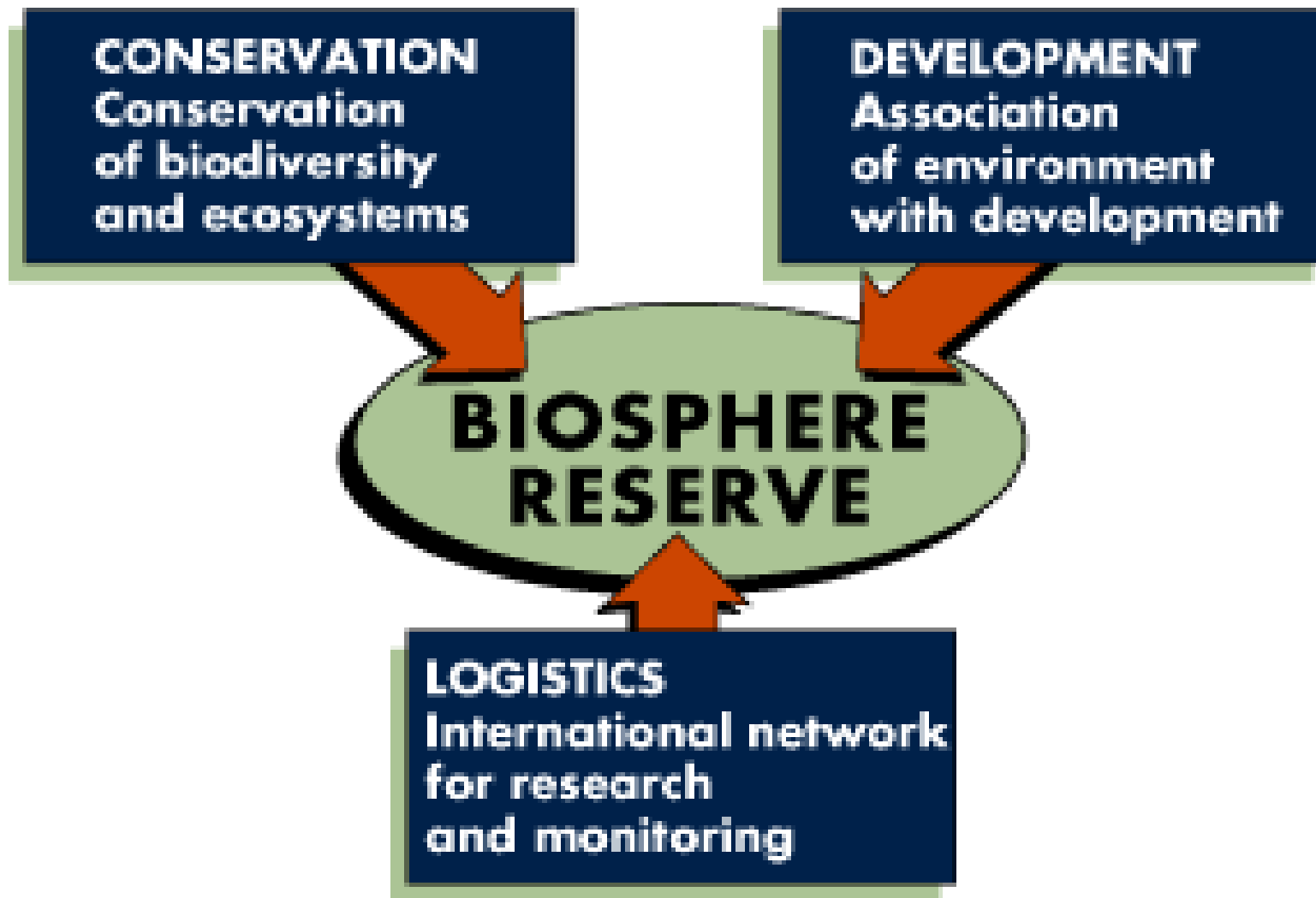
- practical application of UNESCO Man and the Biosphere (MAB) landscape management approach

What is Biosphere Reserve?

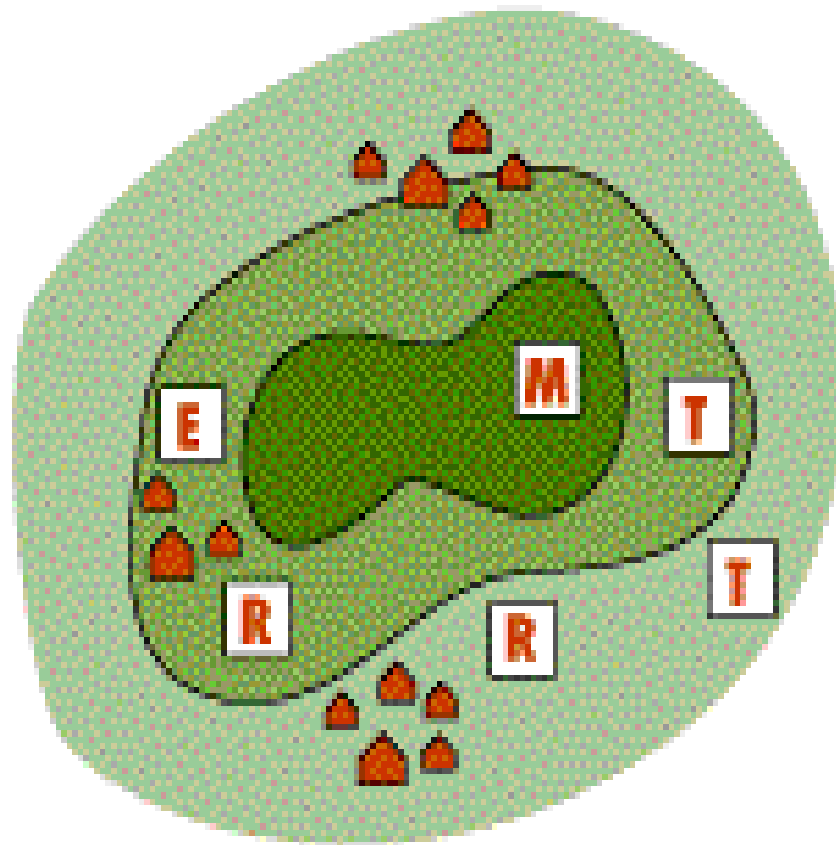
A Biosphere Reserve (BR) is an area of terrestrial and coastal/marine ecosystems, or a combination thereof, which is internationally recognized **within framework of UNESCO's Program on Man and the Biosphere (MAB)**.
(Seville Strategy, 1995)

It is established to promote and demonstrate sustainable development models and a balanced relationship between humans and the biosphere.

THE THREE FUNCTIONS OF BIOSPHERE RESERVES



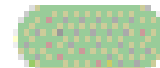
BIOSPHERE RESERVE ZONATION



Core area



Buffer zone



Transition area



Human settlements



Research station



Monitoring



Education /training



Tourism /recreation

Zonation

A **Biosphere Reserve** is a landscape which includes one or more protected areas and its surrounding that are managed to combine both conservation and sustainable use of natural resources.

Simple in design, consists of
Core Area, Buffer Zone, and Transition Area

Frequently, BRs are an extension of an existing protected area, e.g. a National Park, Wildlife Reserve, or Strict Nature Reserve which has been 'expanded' by designating a BR around it with the reserves as the **Core Area**.

The Core Areas would ideally have forest areas around it which may be used for economic purposes especially for local communities. This is called the **Buffer Zone**.

The Buffer Zone is surrounded by various development areas, such as : farms, estate crops, settlements, infrastructures. This is called the **Transition Area**.



**PROPOSED GIAM SIAK KECIL-BUKIT BATU
BIOSPHERE RESERVE
RIAU PROVINCE, SUMATRA, INDONESIA**



**SUBMITTED BY :
THE NATIONAL COMMITTEE
INDONESIAN MAN AND THE BIOSPHERE PROGRAM**

SUPPORTED BY:



**PROPOSED MANAGEMENT PLAN
GIAM SIAK KECIL-BUKIT BATU
BIOSPHERE RESERVE
RIAU PROVINCE, SUMATRA, INDONESIA
2009 - 2013**



**PRESENTED BY:
THE NATIONAL COMMITTEE
INDONESIAN MAN AND THE BIOSPHERE PROGRAM**

SUPPORTED BY:



Collaborative Research



Pekanbaru, Riau
February 19, 2009

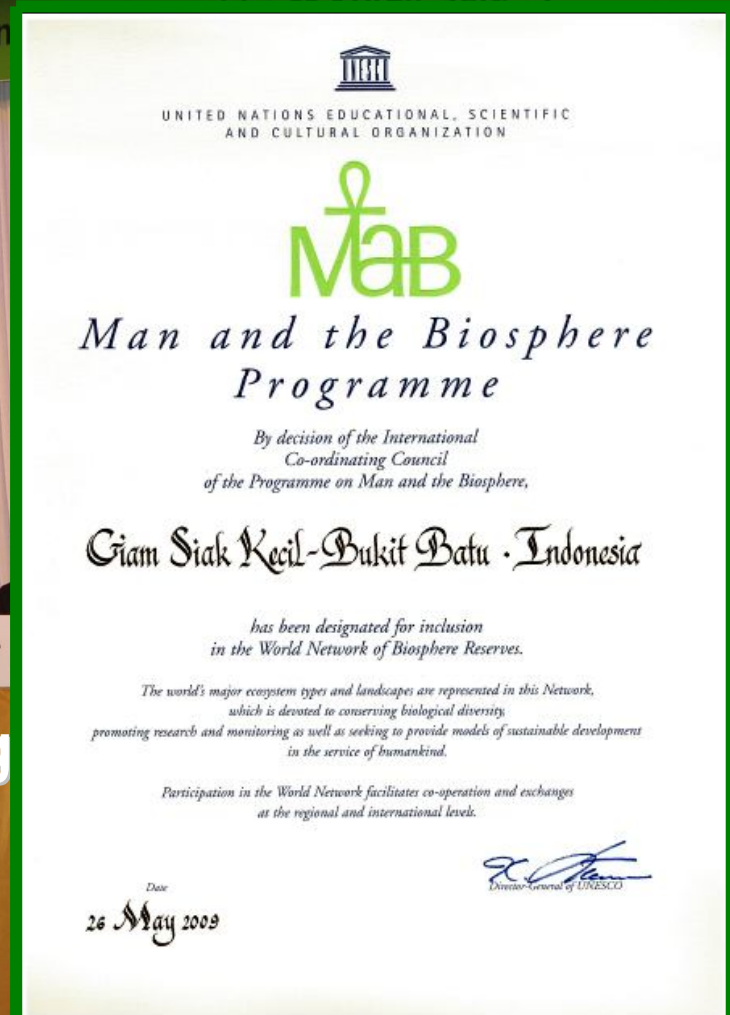
Bureau of R&D of Riau Province, LIPI, BBKSDA of Riau, Sinar Mas Forestry, and UNRI signed a **MoU concerning R&D in the GSK-BB Landscape**

AREAS OF COLLABORATIONS :

1. Research and development of science and technology which encompasses, among others: **eco-hydrology and natural resources of the peat swamp forest, as well as the socio-economic condition of the local communities.**
2. Compilation and arrangement of documents, scientific **publications**, and the **dissemination** of the results of research and development, in order to formulate the management policy of the Giam Siak Kecil – Bukit Batu landscape.
3. Establishment and the development of a **Research Station** to support the joint co-operational activities.

**Jeju City, Republic of Korea
May 26, 2009**

21st Session of the International Co-ordinating Council of the
Man and the Biosphere Programme
21st MAB/ICC
May 25 ~ 30, 2009 Jeju KAL Hotel, Korea
Organized by UNESCO Hosted by Ministry of Environ



**During the 21st MAB/ICC – UNESCO meeting
the proposed GSK-BB Biosphere Reserve
was officially approved.**



May 26, 2009

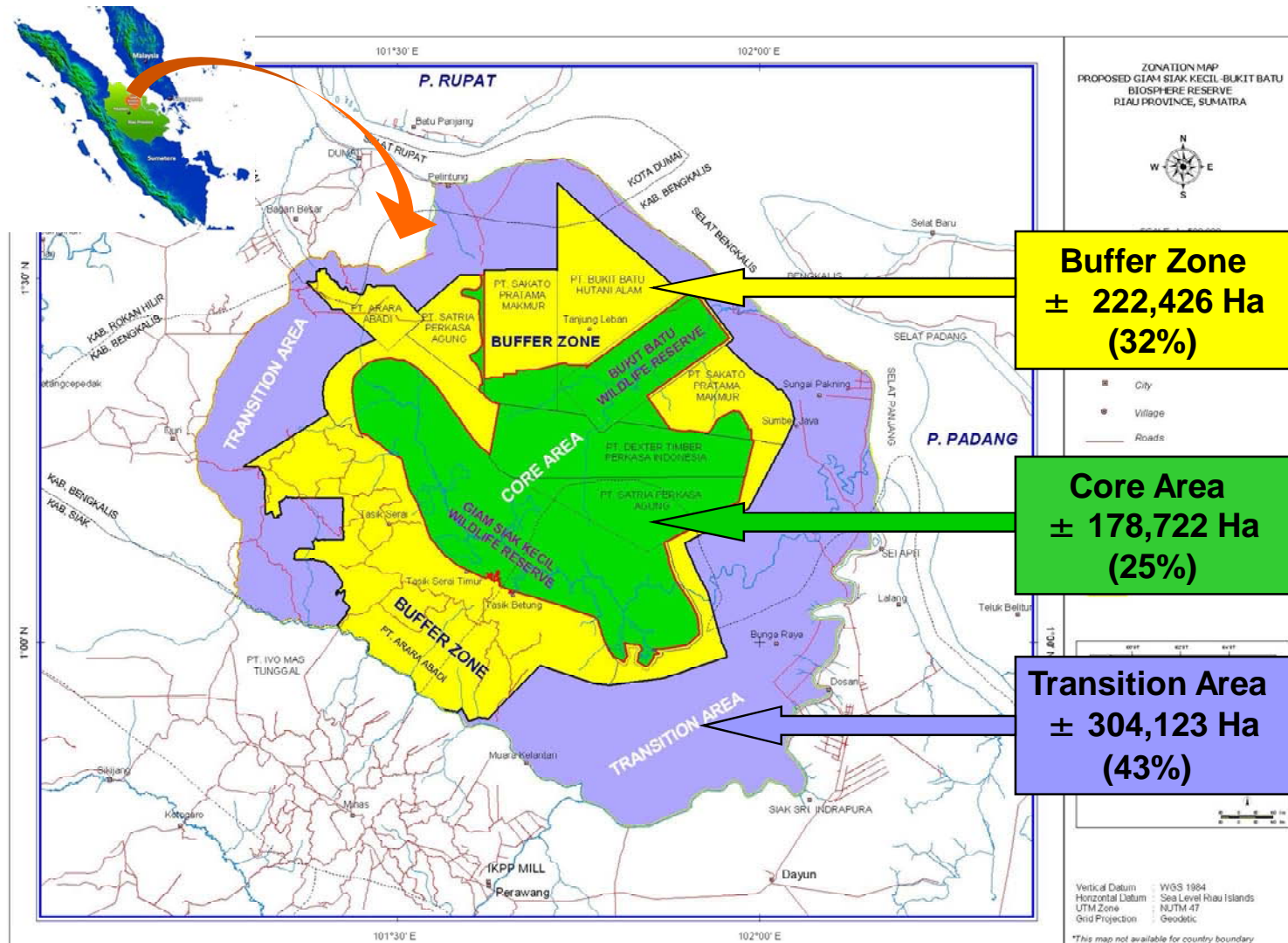
*GSK-BB has been designated for inclusion
in the World Network of Biosphere Reserves*

The World Network of BRs

- **1995 : 324 BRs in 82 countries**
- **2004 : 440 BRs in 97 countries**
- **2008 : 531 BRs in 105 countries**
- **2009 : 553 BRs in 107 countries**
- **2010 : 564 BRs in 109 countries**

Giam Siak Kecil – Bukit Batu

is the first Biosphere Reserve in the world
nominated and co-managed by the private sector



GSK-BB Biosphere Reserve

Core Area : **178,722 ha**

- Giam Siak Kecil Wildlife Reserve : 84,967 ha
- Bukit Batu Wildlife Reserve : 21,500 ha
- **Sinar Mas Forestry & Partners** (production forest) : **72,255 ha (40%)**

Buffer Zone : **222,426 ha**

- **Sinar Mas Forestry & Partners** (plantation forest) : **195,259 ha (88%)**
- Others (production forest) : 27,167 ha

Transition Area : **304,123 ha**

- Estate crops, agriculture, settlements, etc. : 298,458 ha
- Sinar Mas Forestry & Partners (plantation forest) : 5,665 ha

Total Area : **705,271 ha**

Core Area Development



- Research Station in Tasik Betung (Siak Regency) and Air Raja (Bengkalis Regency)
- Education and training
- Ecotourism
- Carbon credits (e.g. REDD+)
- Payment for Environment Services (PES)



Buffer Zone Development



- Composed mainly (88%) of pulpwood plantation managed by Sinar Mas Forestry and Partners
- **Well-managed pulpwood plantation forest supporting the protection of the Core Area**



An aerial photograph showing a large-scale plantation of Eucalyptus pellita trees. The trees are arranged in neat, parallel rows across rolling hills. A light-colored dirt road or path cuts through the forest, winding from the lower right towards the upper center. The background shows more forested hills under a clear sky.

Buffer Zone

Eucalyptus pellita plantation forest
PT. Arara Abadi (Sinar Mas Forestry)

Transition Area Development



Dominated by oil-palm plantations, small holder food crops and other farms , village settlements, etc.

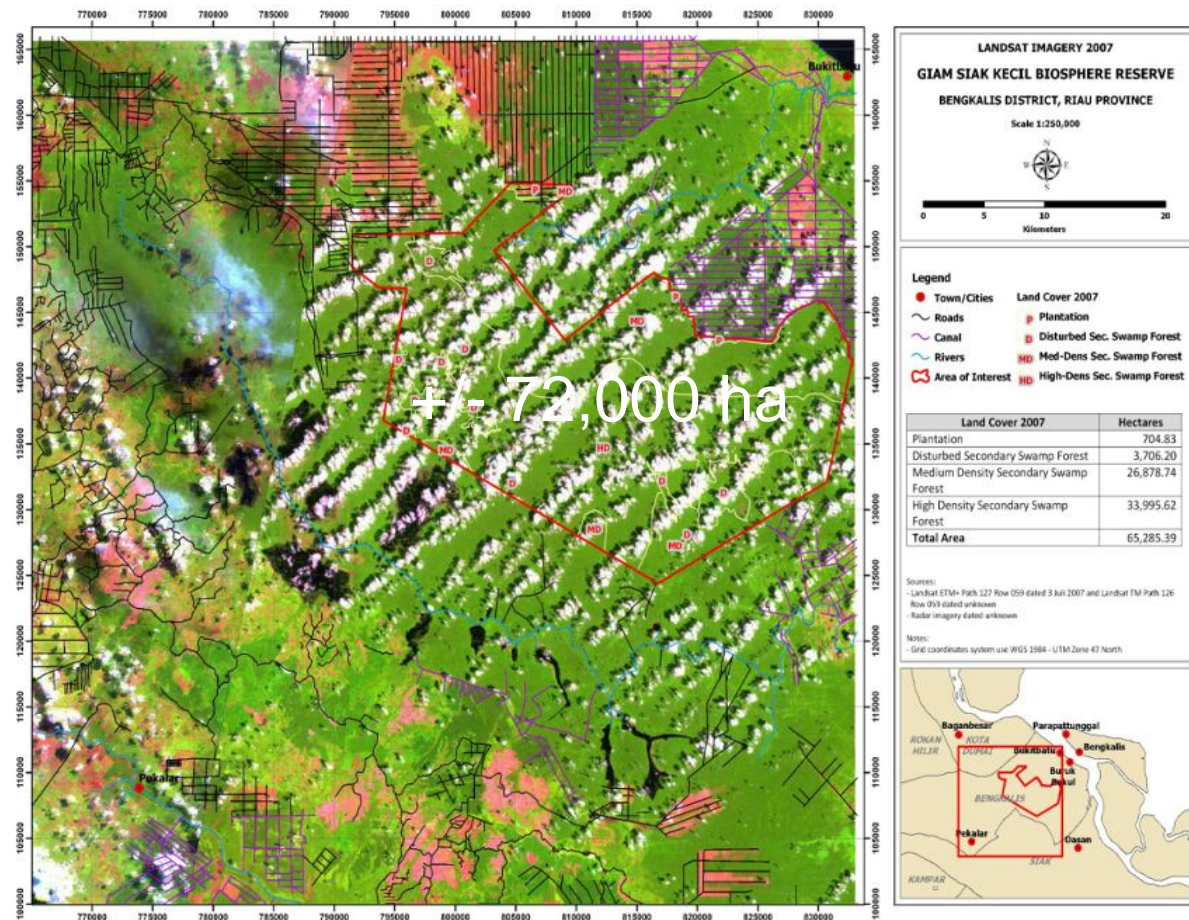
Area for collaborating and developing community-based livelihood development models



Potential REDD+ Project

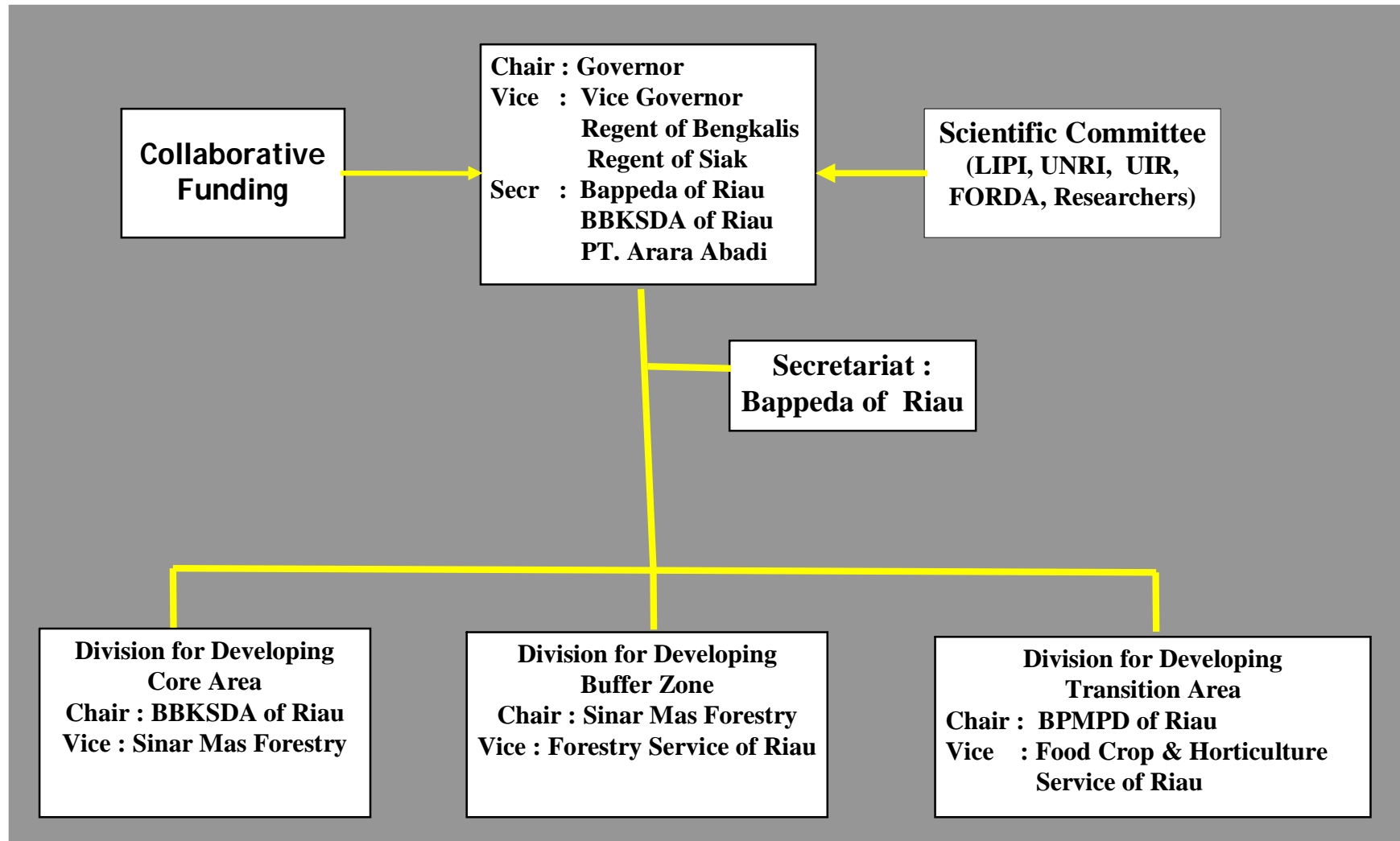
Create the GSK BR , a
pilot project of REDD+
➤ 150 to 350 Mt CO₂ (URS
Indonesia, 2008)

Use the fund that will be
generated for the
management of GSK
Biosphere Reserve (in
addition to other fund
sources)



The Coordinating Board of Management of the GSK-BB BR

(Decree by The Governor of Riau No. 920/V/2010 dated 14 May 2010)



Responsibilities

The Coordinating Board shall:

- ☐ **carry out and implement the coordination and communication between various authorized institution/agencies and stakeholders**
- ☐ **assign and share roles and responsibilities**
- ☐ **implementing the management approach GSK-BB Biosphere Reserve which encompasses the conservation areas, the natural landscapes, and the cultivated areas**

Funding

All expenses required for the execution of the activities of the Coordinating Board, in accordance with the functions and responsibilities of all the members of the Coordinating Board on the management of the Giam Siak Kecil – Bukit Batu Biosphere Reserve

are charged to the financial resources of the concerned institutions/agencies and/or individual institutions, as well as, other resources that are legal and not binding.

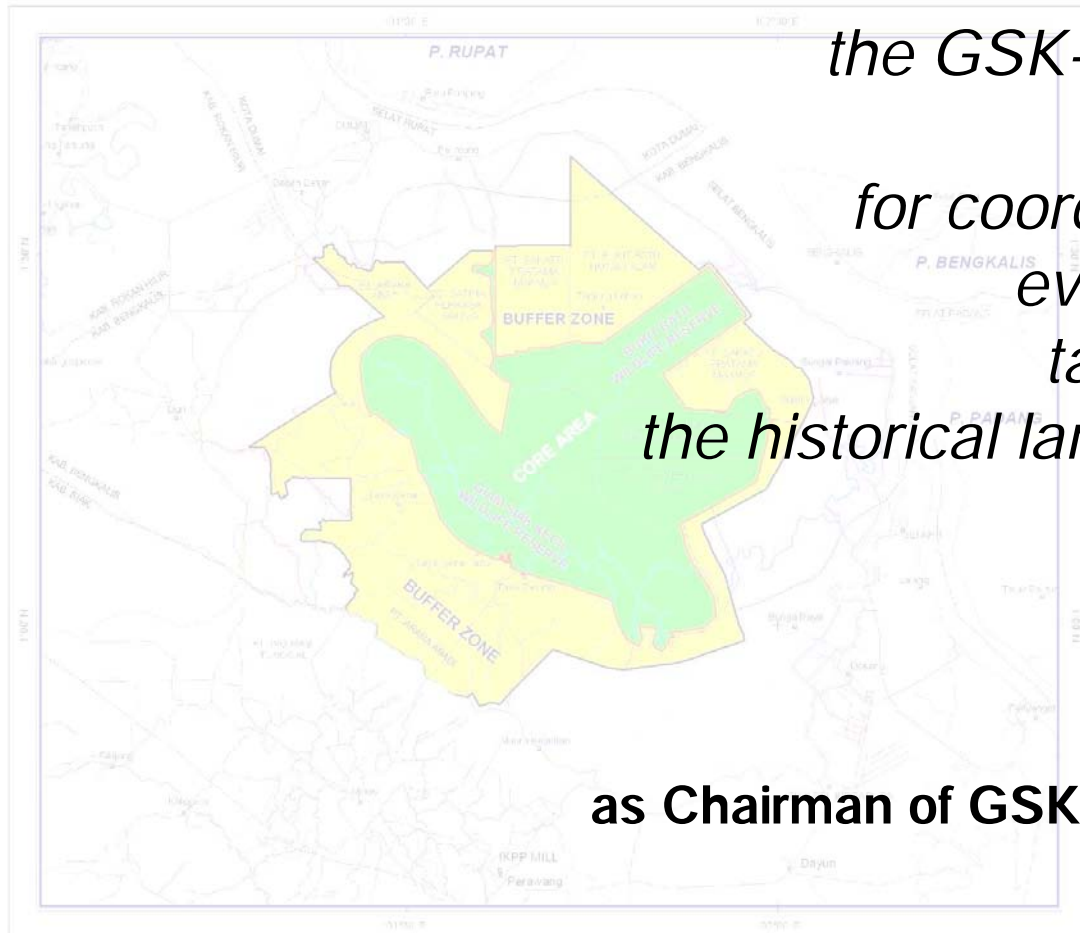
Concluding remarks

GSK-BB Biosphere Reserve is

- ☐ a practical public-private partnership for merging biodiversity conservation and sustainable use of tropical peat swamp forest
- ☐ an effective approach where scientific knowledge and governance modalities are combined to reduce biodiversity loss, improve livelihoods, enhance social, economic and cultural conditions for environmental sustainability
- ☐ through the involvement of local communities and the participation of key stakeholders in the management of the landscape.

Concluding remarks

*.....in the future
the GSK-BB Biosphere Reserve
will function as a model
for coordinating and integrating
every development policy
taking into consideration
the historical land rights and resources*



H.M. Rusli Zainal
Governor of Riau
as Chairman of GSK-BB BR Coordinating Board

Giam Siak Kecil – Bukit Batu Biosphere Reserve

terima kasih

