

Research Collaboration and Dissemination of Innovation: Case of Bogor Agricultural University



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3rd Japan-Indonesia Rectors' Conference
Hokkaido University, 5-6 November 2015

FACULTY

1. AGRICULTURE
2. VETERINARY MEDICINE
3. FISHERY & MARINE SCIENCES
4. ANIMAL SCIENCES
5. FORESTRY
6. AGRIC. ENG. & TECHNOLOGY
7. MATH & NATURAL SCIENCES
8. ECONOMY & MANAGEMENT
9. HUMAN ECOLOGY

GRADUATE SCHOOL
BUSINESS SCHOOL
VOCATIONAL STUDIES

Student Body:
➤ 28 000



Bogor Agricultural University (IPB), Indonesia
www.ipb.ac.id



CENTERS FOR RESEARCH AND COMMUNITY DEVELOPMENT

1. TECHNOLOGY AND ENGINEERING

- South East Asian Food and Agricultural Science (SEAFAST)
- Center for Tropical Horticulture Studies (CTFS)
- Center for Tropical Animal Studies (CENTRAS)
- Surfactant and Bio-energy Research Center (SBRC)
- Center for Research on Engineering Application in Tropical Agriculture (CREATA)

2. ENVIRONMENTAL

- Environmental Research Center (ERC)
- Post-mining Reclamation Studies (PRS)
- Center for Climate Change Risk and Opportunity Management in South East Asia and Pacific (CCROM)
- Center for Disaster Studies (CDS)



CENTERS FOR RESEARCH AND COMMUNITY DEVELOPMENT

3. SPATIAL AND COMMUNITY DEVELOPMENT

- Center for Agricultural and Rural Development Studies (CARDS)
- Center for Regional Systems Analysis Planning and Development (CRSAPD)
- Incubator and Entrepreneurship Development Center (IEDC)
- Center for Alternative Dispute Resolution Studies (CARE)
- Center for Gender and Child Studies (CGCS)
- Center for Human Resources Development (CHRD)

4. MARINE AND COASTAL RESOURCES

- Center for Coastal and Marine Resource Studies (CCMRS)



CENTERS FOR RESEARCH AND COMMUNITY DEVELOPMENT

5. BIOTECHNOLOGY AND BIOMEDICINES

- Primate Research Center (PRC)
- Research Center for Biological-Resource and Biotechnology (RCBB)
- Biopharmaceutical Research Center (BRC)

6. ECONOMICS AND FINANCE

- International Center for Applied Finance Economic Studies (Inter-CAFE)
- Center for Islamic Business and Economic Studies (CIBES)



Research Agenda

- **FOOD**
- **ENERGY**
- **POVERTY REDUCTION**
- **ECOLOGY & ENVIRONMENT**
- **BIOMEDICINES**





QS World Rank by Subject (2015):
Agriculture and Forestry
Rank 101-150

During the period of development, Bogor Agricultural University has stepwise objectives of excellent achievement related to academic system and compatibility, relevance and substance, reputable innovation, as well as mainstreaming agriculture in national development.



Rector of Bogor Agricultural University with President of the Republic of Indonesia during IPB3S paddy harvesting in Karawang Regency, September 28th, 2015.



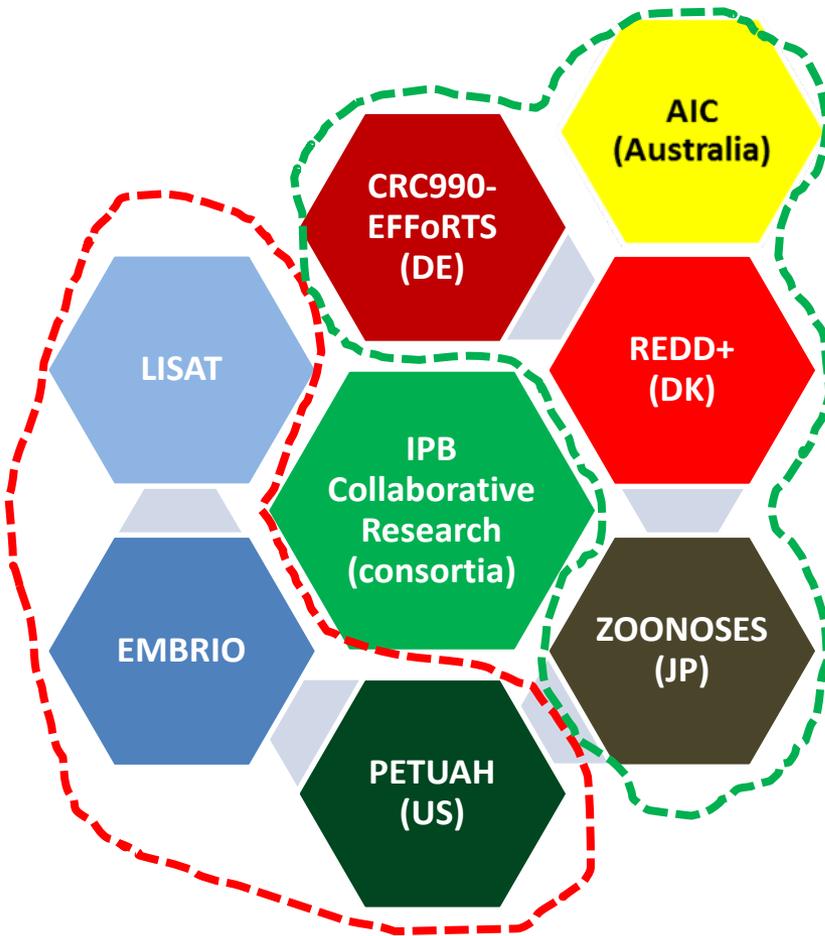
To maintain the spirit of great achievement, Bogor Agricultural University pays a great attention on the research and academic quality improvement, through international accreditation of its study programs and laboratory, ISO certification, and implementation of quality assurance in all aspects of management process.





Bogor Agricultural University's research quality enhancement is conducted through capacity strengthening of research collaboration capacity on various research platforms that can bring funding through the development of research consortiums and research clusters.

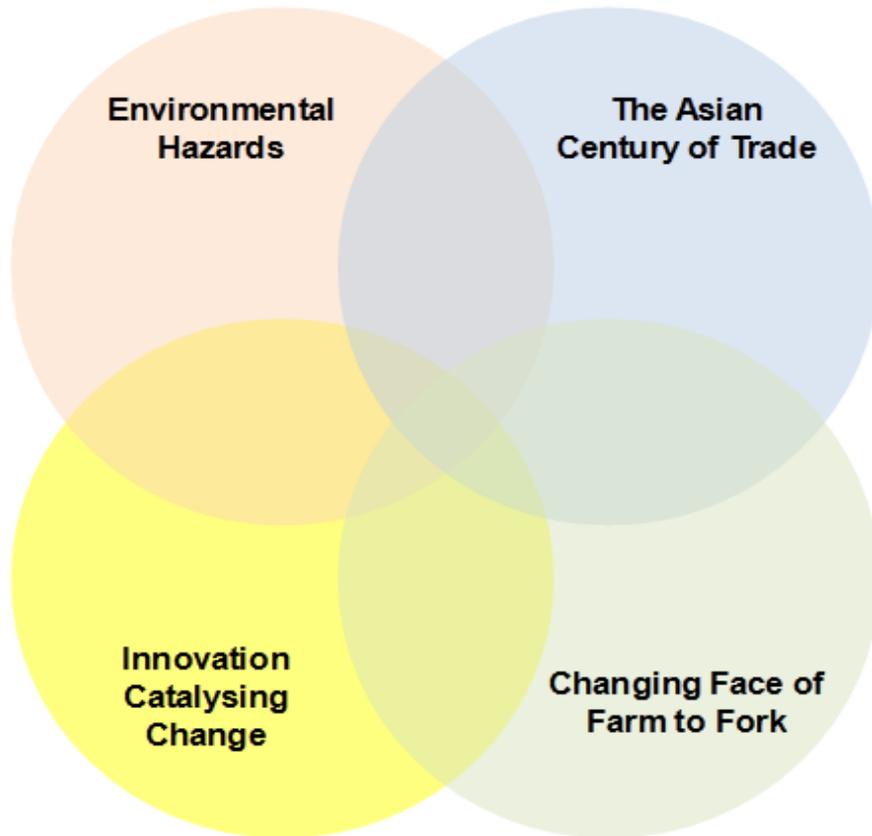
Strategic research platforms



Research Platforms	Research Area	Main Source of Funding
CRC990 – EFFoRTS	Ecology & Socio-economy – Lowland Rainforest Transformation system	DFG, RSITEKDIKTI
REDD+	Environment & Climate Change – Role of Community Monitoring	DANIDA
ZONNOSES	Health & Biomedicine – Flying Fox as model	JST/SATREPS, JICA
AIC	Food & Agriculture – Food Security & Agro-processing	AIC , RISTEKDIKTI
EMBRIO	Marine Biodiversity – Coral Reef & Tuna	IPB, DIKTI
LISAT	Remote Sensing/Satellite – Food Security & Environmental Monitoring	LAPAN, IPB, RISTEKDIKTI
PETUAH	Green Knowledge – NRM, SA, RE	MCA-I

At IPB, research initiatives that are facilitated by Directorate for Research & Innovation and coordinated with LPPM

AIC 2015 - megatrends in Food & Agr.

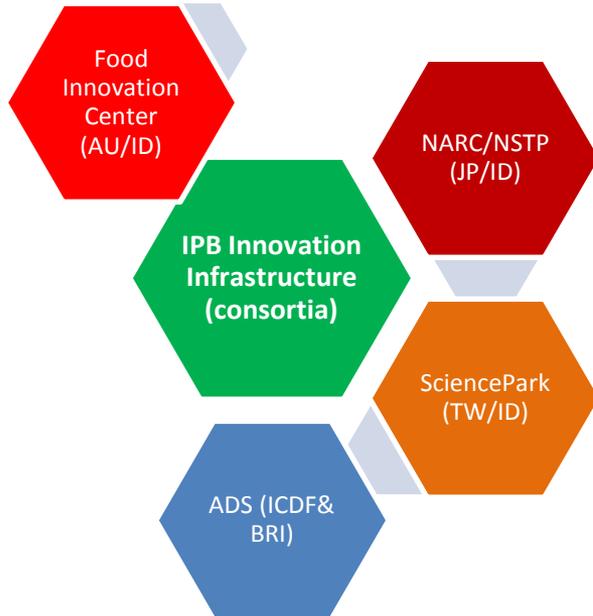


Environmental Hazards:

- **Climate change and uncertainty**
- **Increasing people movements**
- **Increasing movement of plants, animals and their products**

Source: CSIRO (unpublished)

Innovation platforms



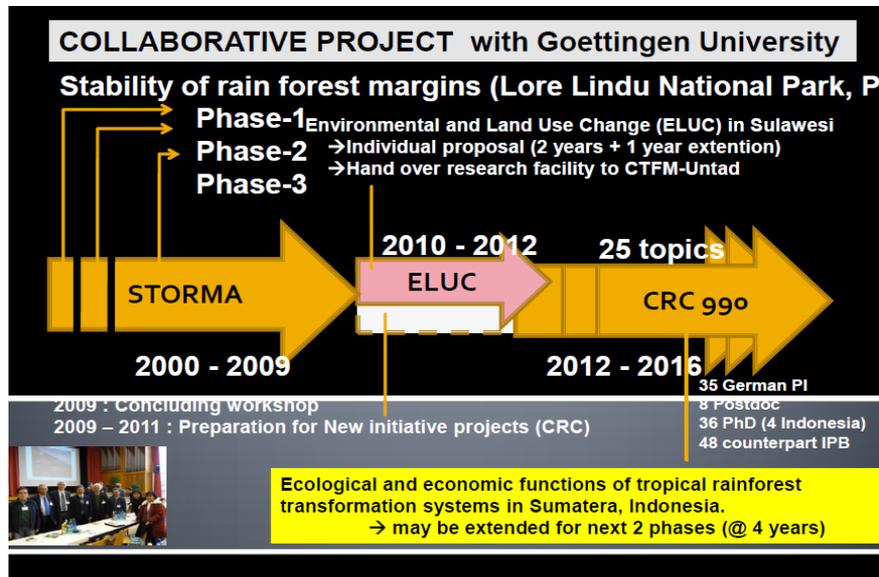
Innovation Platforms	Research Area	Main Source of Funding
NARC (New Academic Research Cluster) → NSTP -Preparatory phase-	Food & Agriculture <i>(Bio-pharmaca & Seed Industry)</i>	Public Private Partnership (PPP)
IPB Taman Kencana SciencePark	Science based business <i>(marine instruments, functional food, bio-pharmaca), service lab.</i>	PT. BLST <i>(IPB holding company)</i> , CSR, APBN
ADS (Agribusiness Development Station) -Handover-	Community empowerment & GAP – <i>Horticulture products</i>	Commercial sales, CSR



Collaborative Research as the Key for Long Term Partnership: Experience of Bogor Agricultural University

CRC990/EFForTS

DFG & associated DIKTI Fund



- Continuation of 9 year STORMA Research in Palu (Central Sulawesi), funded by DFG
- Since 2012, a research consortium of CRC990/EFForTS (UGOE-IPB-UNJA-UNTAD) located in Jambi. **“Snow-ball effects”** are recognized.
- Other associated larger activities (non-research components): Erasmus Mundus (EXPERTSASIA, ALFABET), DAAD (HEP, Alumni)
- Recommended by the reviewer for the 2nd Phase (2015-2018): New research design and topics have been evaluated .

REDD+ | DANIDA

The poster is titled "International Seminar & Workshop" and "REDD+ - The Forest Grab of All Times?". It is divided into two main sections: "International Seminar" and "Workshop". The seminar is on March 10th, 2014, at the IPB International Convention Center. The workshop is from March 11th to 15th, 2014, at the IPB Dramaga Campus and Gunung Walat Educational Forest. The poster features a stylized illustration of a forest with a large tree in the foreground. At the bottom, it lists the organizers: Institut Pertanian Bogor (IPB), University of Copenhagen, and other institutions, and the supporter: the Ministry of Foreign Affairs of Denmark (DANIDA).

International Seminar & Workshop

REDD+ - The Forest Grab of All Times?

International Seminar
March 10th, 2014
IPB International Convention Center, Botani Square, Bogor-Indonesia

Workshop
March 11th – 15th, 2014
IPB Dramaga Campus, Bogor-Indonesia
Gunung Walat Educational Forest (GWEF) – IPB, Sukabumi-Indonesia

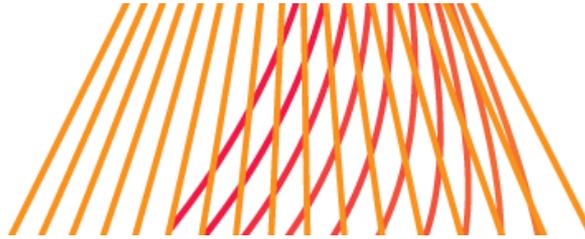
Organized by:

UNIVERSITY OF COPENHAGEN

Supported by: MINISTRY OF FOREIGN AFFAIRS OF DENMARK
DANIDA | INTERNATIONAL DEVELOPMENT COOPERATION

- Since early 2014 and PhDs students involvement
- Research sites have been selected, namely: Berau District (East Borneo)
- Joint PhD supervision with Univ. Copenhagen, Roskilde Univ.
- New associated research initiative has been proposed and awaiting for decision → extended to new partners

Food & Agriculture | AIC & RISTEKDIKTI



- Relatively new Consortium under Australia Indonesia Center – AIC & DIKTI
- IPB as coordinator of cluster Food and Agriculture in Indonesia
- Food Security & Agro-processing sectors are the main research themes
- The “*quick win*” strategies have been formulated
→ start-up fundings and activities

EMBRIO | *new research initiative*

Enhancing Marine Biodiversity Research in Indonesia (EMBRIO)
Definition of Research Clusters (DRAFT)

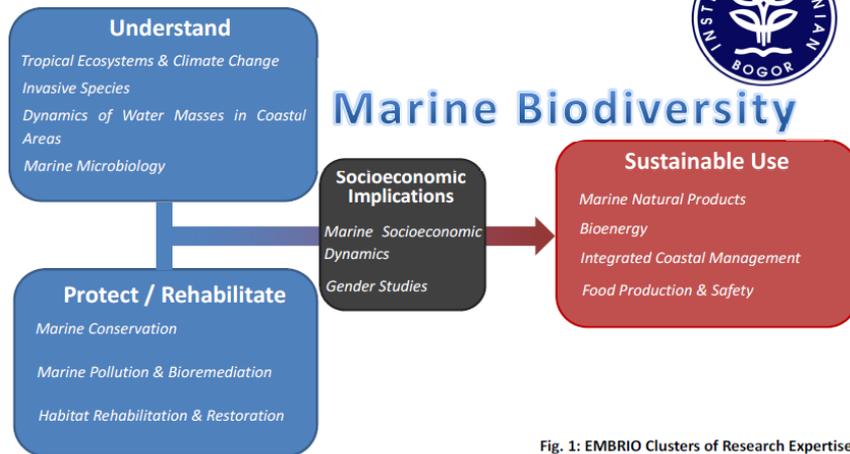
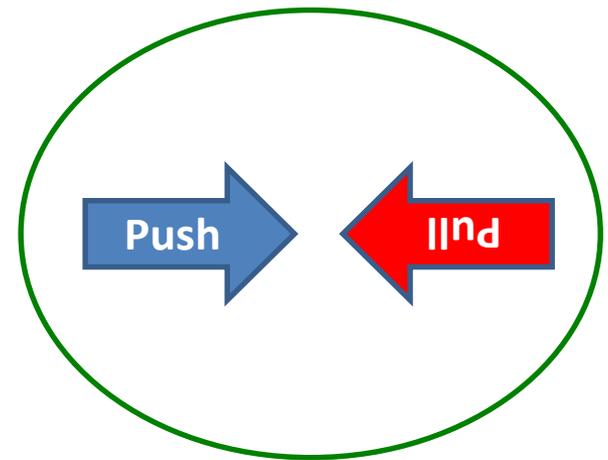


Fig. 1: EMBRIO Clusters of Research Expertise

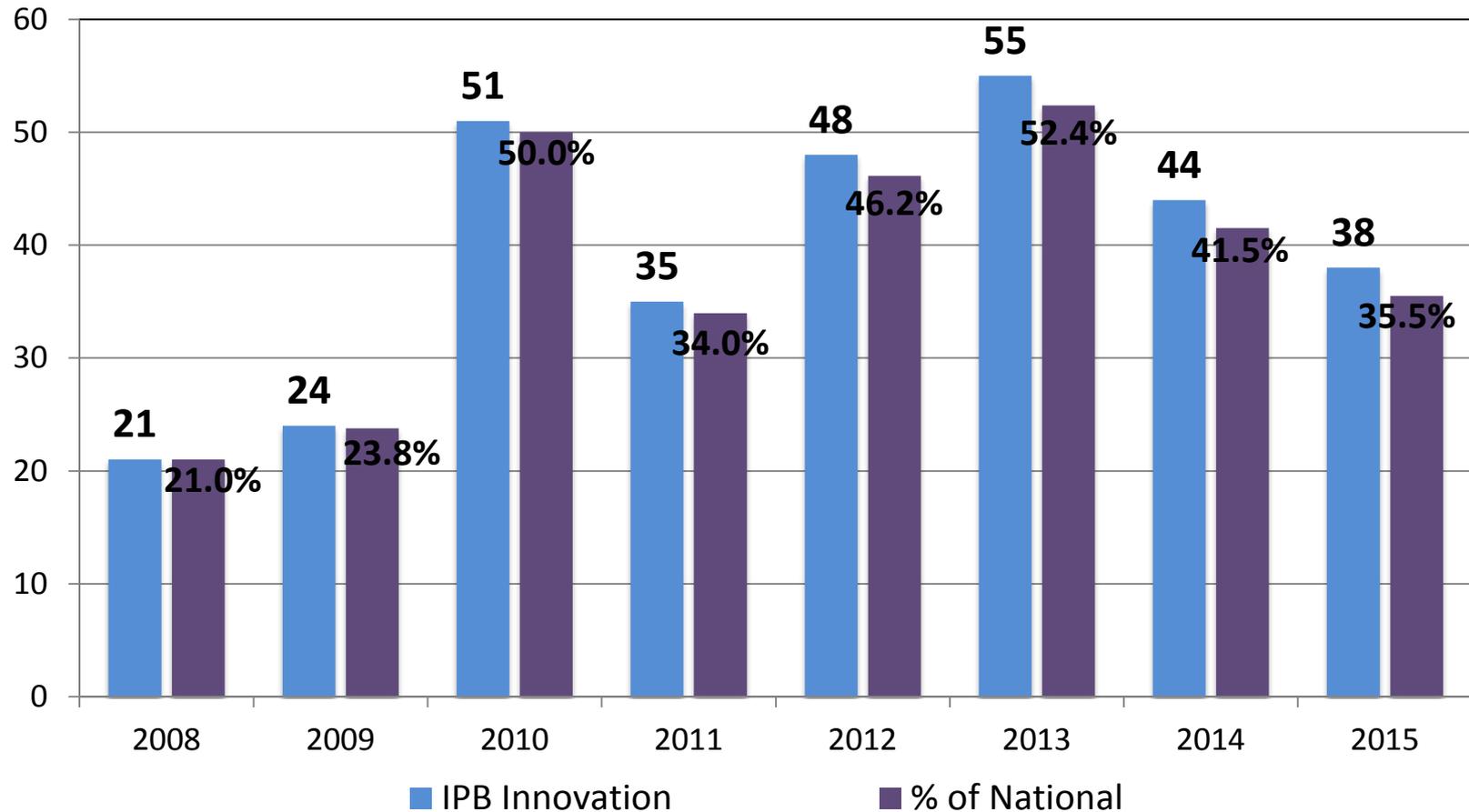
- EMBRIO= Enhancing Marine Biodiversity Research in Indonesia
- Since 2013 initiated and the white paper/concept note has been launched.
- Start attracting new partners (national & international)
- Research proposals have been submitted to various national schemes (BOPTN, KLN DIKTI, SINAS, DNPI dll.)
- Promoting the consortium EMBRIO to national and international partners - MoUs with Uni. Jena, Uni. Oldenburg (DE) & Aarhus (DK), Victoria University of Wellington (NZ)

Adhoc Research Cluster – IPB

- Complex System in Agriculture
- Molecular Science & Systems Biology
- Nano Science and Technology
- Vet. Stem Cell
- Biomaterial & Bio-metal
- Arboriculture
- Ecosystem Modelling
- Bio-economy
- Oil Palm, Bamboo, Sengon etc.



Indonesia's Most Prospective Innovative Works as selected by Business Innovation Center Indonesia (2008 – 2015)



IPB Most Prospective Innovation in 8 years: 326

In Average : 39% from the National Most Prospective Innovation

Patent and other Intellectual Property Rights

(per September 2015)

Types	Status	
	Registered	Granted
Patent	291	75
Brand	14	4
copyright	6	



KEMENTERIAN HUKUM DAN HAK ASASI MANUSIA RI
DIREKTORAT JENDERAL HAK KEKAYAAN INTELEKTUAL

PENGHARGAAN NASIONAL HAK KEKAYAAN INTELEKTUAL 2012

Perguruan Tinggi
Diberikan kepada:

Institut Pertanian Bogor

Jakarta, 26 April 2012



Amir Syamsudin

Kemeterian Hukum dan Hak Asasi Manusia RI

In 2012, IPB received Intellectual Property Rights award as the university with the most number of patent registered and granted.





KEMENTERIAN HUKUM DAN HAK ASASI MANUSIA RI
DIREKTORAT JENDERAL HAK KEKAYAAN INTELEKTUAL

ANUGERAH NASIONAL HAK KEKAYAAN INTELEKTUAL 2015

Perguruan Tinggi dengan Komersialisasi Paten Terbanyak
Diberikan kepada:

Institut Pertanian Bogor

Jakarta, 7 Mei 2015



[Handwritten signature]

IPB received an award from the Ministry of Law and Human Rights Republic of Indonesia as the university with the most number of patent commercialization.





Coordination and efforts for innovation commercialization is conducted by IPB continuously in the form of exhibitions, business meetings and participations in various innovation promotion and award events, including the IPB Investment Summit (IIS) in collaboration with IPB Alumni Association which has resulted in 17 innovations in initiation process for transfer of technology cooperation.



BLST

PT. Bogor Life Science and Technology
Holding Company of IPB
www.blst.co.id

- ❑ The effort to bring these innovations to the industry is managed by our holding company Bogor Life Science and Technology (BLST) as the best practice of the transformation toward an entrepreneurial university.
- ❑ The BLST as a part of fundamental achievement of the university operate three important business lines of science base, services and asset base practices.



NEW

Ramuan Herbal Warisan Tradisi
aman • bermanfaat • alami

IPB INSTITUT PERTANIAN BOGOR

Serambi Botani adalah produk herbal berkualitas, hasil kolaborasi IPB dengan pemberdayaan potensi UKM

DISCOUNT ALL ITEM!



The science based products are ranging from bird flue vaccine, seeds, functional food and herbal medicine.





The services based products are among others consulting company, credit banking services, international convention center, hotel and publishing company, whereas asset based is managing university land for commercial blocks.

Examples of Collaboration between Bogor Agricultural University and Industries

Collaboration with International Companies:

- Shigeta Pharmaceuticals
- Sumitomo Mitsui Banking Corporation
- Elders Corporation
- Cargill, Inc.
- Yanmar Engineering Company

Collaboration with National Companies:

- PT Biofarma
- PT Bogasari
- PT Bintang Toedjoe
- PT Pertamina
- PT Astra Agro Lestari



Closing

- Research consortia provide solutions for problems related to resource sharing: finance, expertise (skill & knowledge) as well as research infrastructure and facilities
- Sound management of large research platform is necessary to ensure the sustainability of collaboration (incl. non-research component) by internalizing research administration units at the respective HEI and sound risk management
- Mutual Partnership between University and Industry plays important Role in transforming Innovation to the Industrial Marketable Products



Thank You
Arigato Gozaimasu