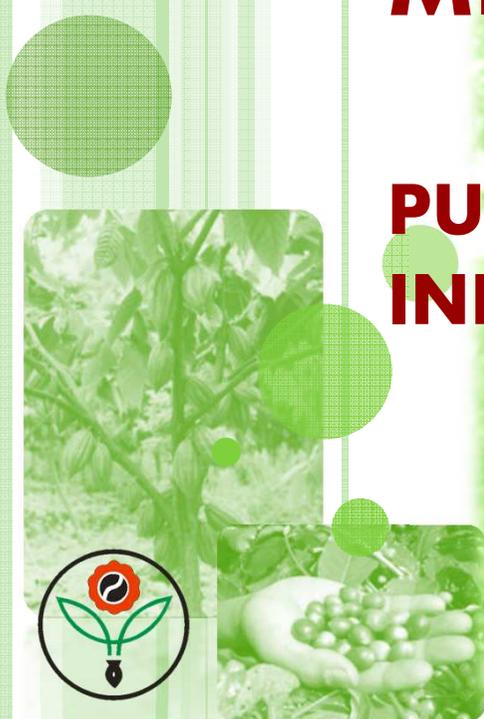
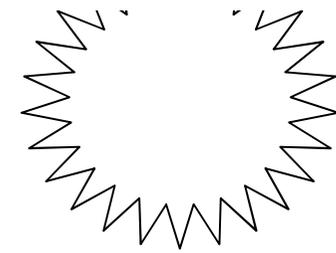


Menuju Kakao Indonesia Berkelanjutan

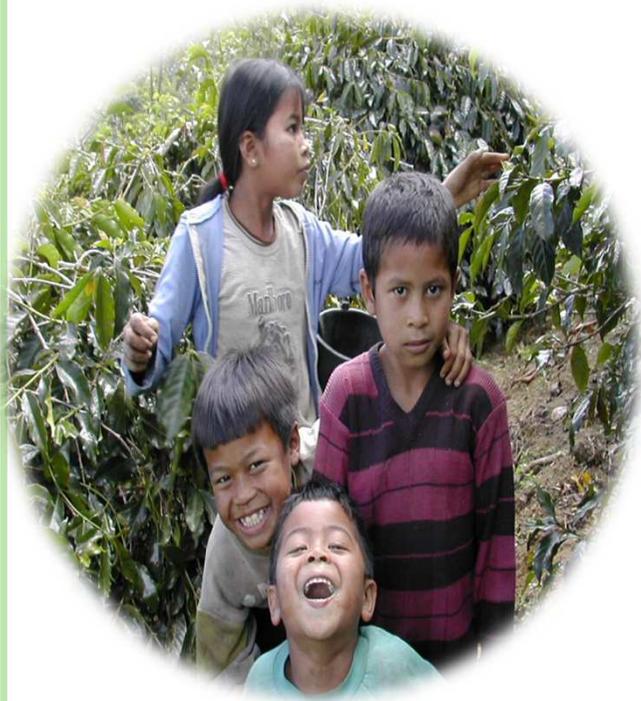
MISNAWI

**PUSAT PENELITIAN KOPI DAN KAKAO
INDONESIA**



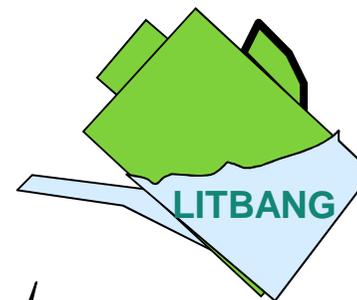


**KEBIJAKAN NASIONAL
(PEMERINTAH)**



**KESEJAHTERAAN
MASYARAKAT**

**PERKOPI-KAKAOAN
NASIONAL TANGGUH**



**BERAKAR PADA:
PETANI, KOPERASI, PEDAGANG/EKSPORTIR,
INDUSTRI, PERKEBUNAN DAN
SELURUH STAKE HOLDER NASIONAL**

**ENV.
FRIENDLY**



**GREEN
ECONOMY**

RESPNSI-BLE



"Sustainable Agriculture" (U.S. Code Title 7, Section 3103) : an integrated system of plant and animal production practices having a site-specific application that will over the long-term:

- Satisfy human food and fiber needs.
- Enhance environmental quality and the natural resource base upon which the agriculture economy depends.
- Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls.
- Sustain the economic viability of farm operations.
- Enhance the quality of life for farmers and society as a whole.

AGRIBISNIS KAKAO SUSTAIN?

COMPETITIVENESS

- COMPETITION TO OTHER COMMODITY
- PRICE AND STRUCTURE
- SUPPLY CHAIN
- YOUTH INTEREST IN AGRICULTURE

IMPOSED REQUIREMENTS

- 3P REQUIREMENT
- CERTIFICATION: CONFUSION AND COST
- KNOWLEDGE AND UNDERSTANDING



TANTANGAN ATAU ANCAMAN



Social

Environment

Product

Challenges
In Agriculture Business,
Sustainability



AGRIBISNIS KAKAO BERKELANJUTAN

MENJADIKAN
AGRIBISNIS
KAKAO

AGRIBISNIS \neq BERTANI
(AGRICULTURE)



FEASIBLE



RESPONSIBLE



FRIENDLY



PRICE DETERMINT

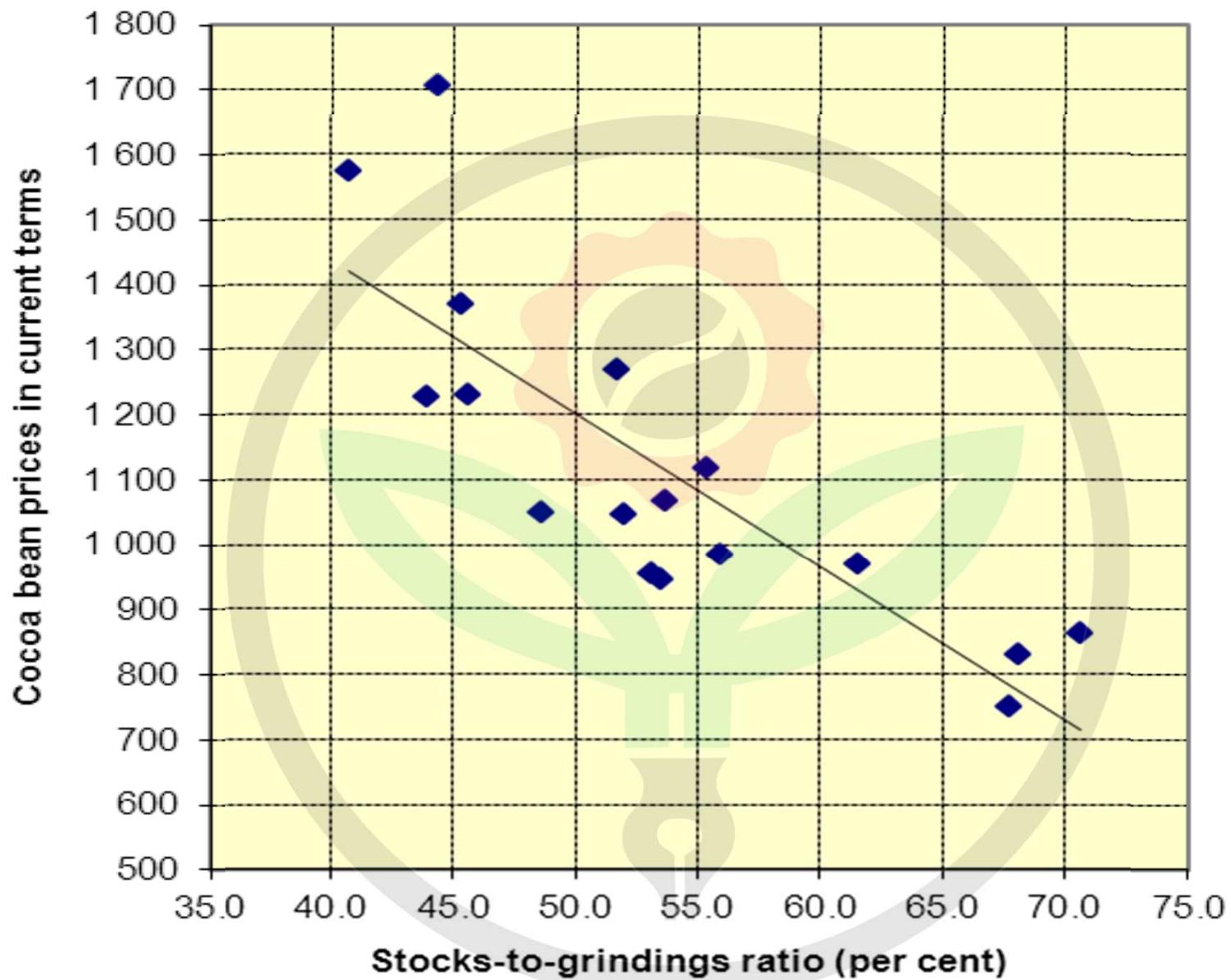
(WORLD COCOA FOUNDATION, 2010)

Cocoa prices are affected by various factors including :

- stock/grind ratios,
- expectations for future production/demand, global food prices, and
- consolidation/fragmentation in cocoa trade and processing industries.

These components generally set the tone for long-term trends in cocoa prices while trading by investment funds tend to drive movement in the short-term.

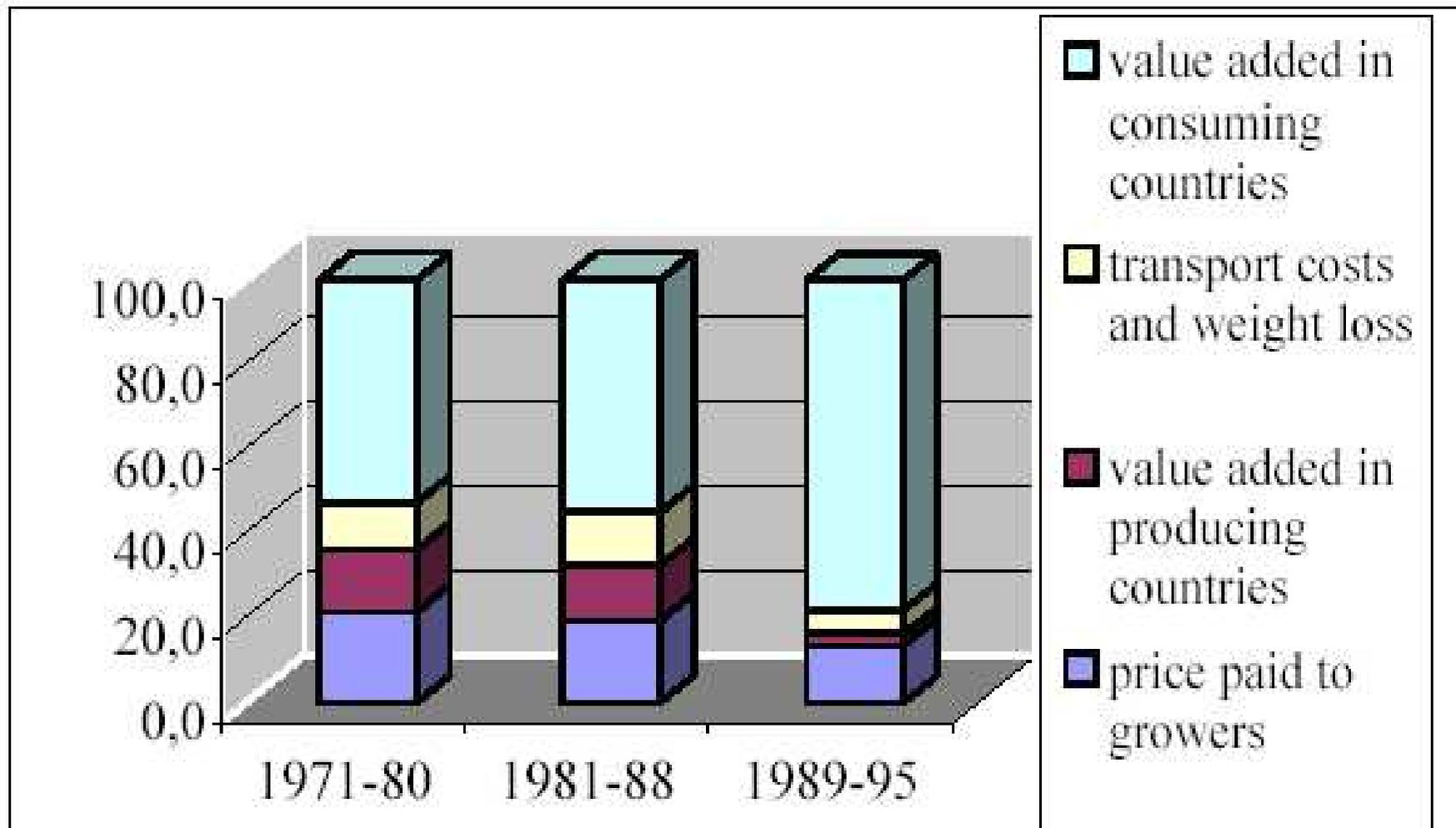




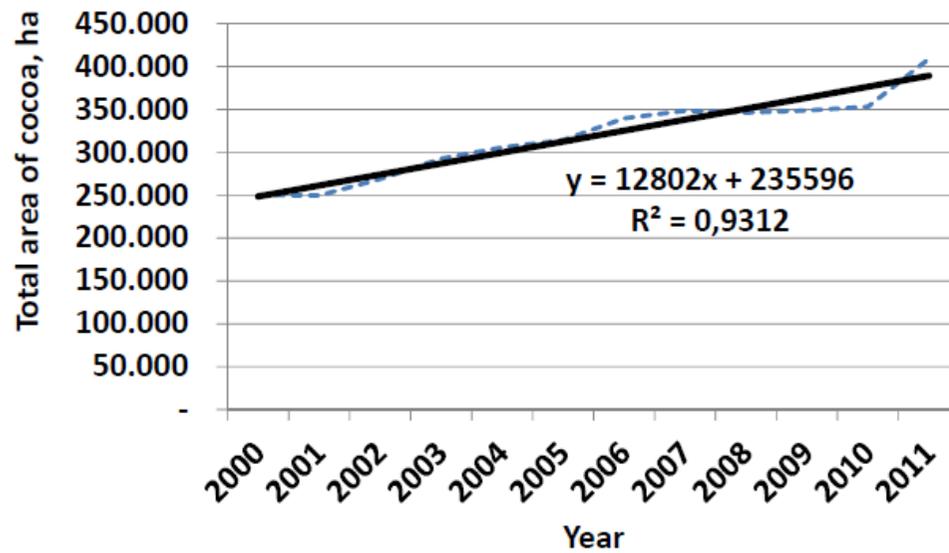
DOUBLE PRODUCTIVITY IS THE ANSWER

Cocoa Industry Committee
 Annual Report 2014-2015
 London, 16-21 September 2015

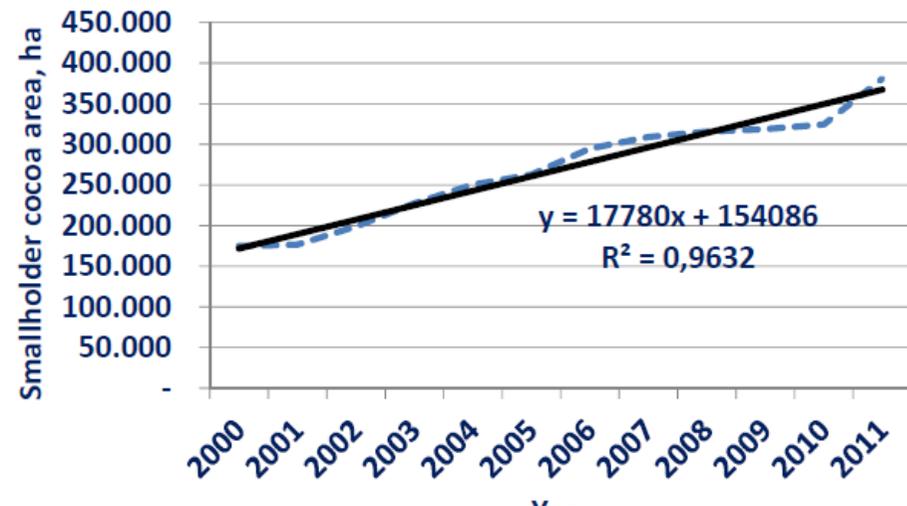
HILIRISASI



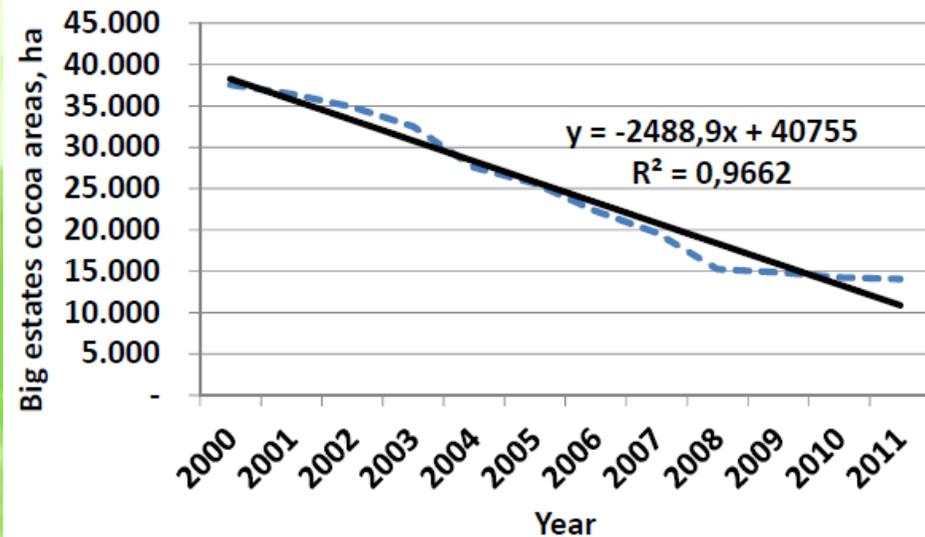
Total area of cocoa in Indonesia during 2000-2011



Smallholder cocoa areas in Indonesia during 2000-2011



Big estates cocoa areas in Indonesia during 2000-2011



AGRIBISNIS KAKAO ECO FRIENDLY?



MASALAH UTAMA

ON FARM, PRODUKTIVITAS
RENDAH

- BAHAN TANAM
- PENGGEREK BUAH KAKAO
- VSD, Phytophthora
- BUDI DAYA (AGRONOMY),
SKALA USAHA



OFF FARM

- MUTU RENDAH, LOW FERMENTATION,
KADAR AIR, JAMUR, KOTORAN,
INKONSISTENSI
- KELEMBAGAAN LEMAH

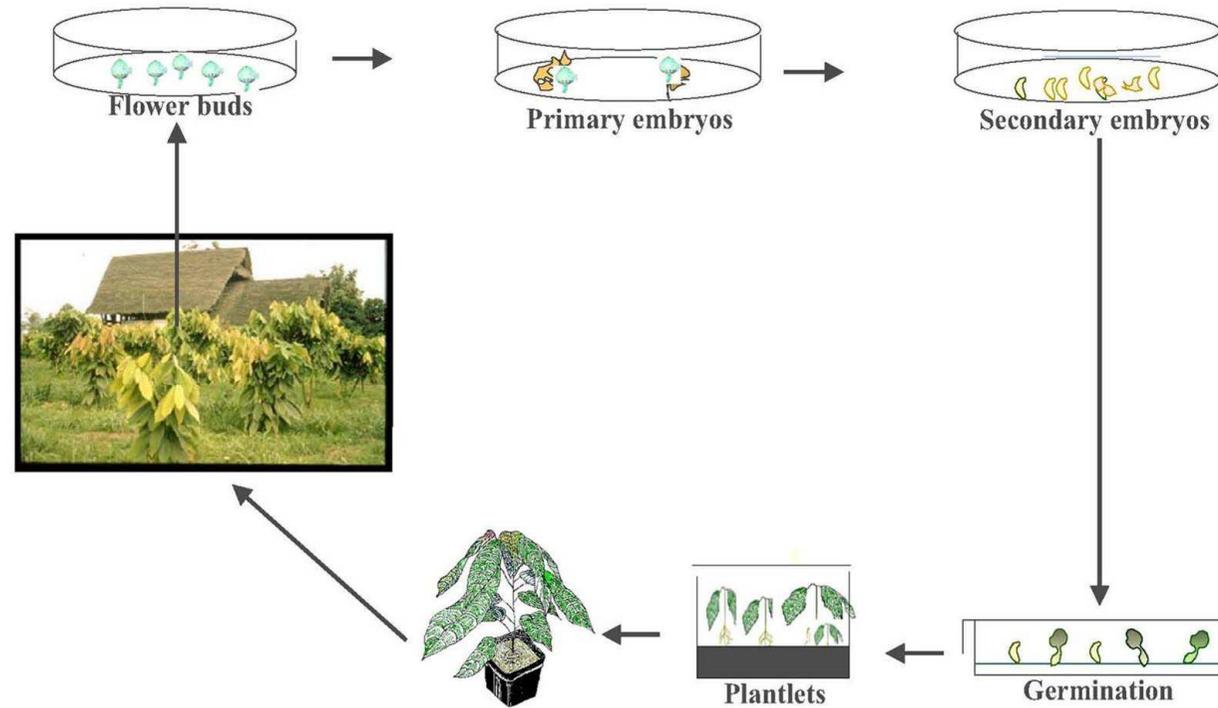


PENINGKATAN PRODUKTIFITAS: BAHAN TANAM + GAP

Indikator	Produktifitas (ton/ha)	Referensi
Rata-rata produktifitas nasional		
- Negara-negara Afrika Barat	0.2-0.3	ICCO (2006)
- Brazil dan Indonesia	0.5-0.6	ICCO (2006), Ditjendun (2009)
- Malaysia	0.8-1.0	MCB (2006)
Potensi teoritik	Up to 11.0	Corley (1983)
Produktifitas tertinggi yang tercatat	5.0-6.8	Lee and Chong (1987)
Rata-rata pada kebun yang dikelola baik	2.0-4.6	Mohd. Yusuf <i>et al.</i> , (1998)



Cocoa somatic embryogenesis propagation



PENYEDIAAN BAHAN TANAM SE UNTUK GERNAS KAKAO

Menjawab keperluan bahan tanam unggul secara cepat dan berkualitas

PRODUKSI

- 2008: 1,1 juta Bibit
- 2009: 20 juta Bibit
- 2010: 25 juta Bibit
- 2011: 35 juta Bibit



16



Masalah di level produksi biji

CARE TERHADAP TANAAN DAN PRODUK?



PELUANG DAN TANTANGAN

- **Regular market >> terminal, contract**
(pasar reguler spt di terminal, kontrak-2 umumnya)
- **NICHE MARKET** *(pasar ceruk, terbatas, tertentu)*

Niche market –
environmental

e.g. Organic

Niche market Specialty
coffee/cocoa

e.g. Starbucks, Juan
Valdez

Niche market – economic/
social

e.g. Fairtrade, IG

Utz Cert, Rainforest Alliance, CCCC, CAFÉ
Practices

 *(Lingkungan)*

(spesialti)

(sosial ekonomi)

CERTIFIED COFFEE, MARKET SHARE



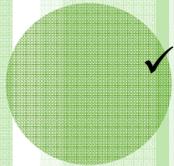
General Requirements

<u>Cert Program</u>	<u>Env.</u>	<u>Econ</u>	<u>Social</u>	<u>Safety</u>
Organik	**	*	*	***
Utz Certified	*	**	**	**
CAFE Practice	*	*	***	**
Nespresso	*	**	*	*
Bird friendly	***	*	*	*
Rainforest Alliance	***	*	**	*
4C	*	*	*	*
Fair Trade	*	***	**	*
Global GAP	**	**	**	**



CRITICAL POINTS TO INITIATE

Social	Environment	Product / Economy
✓ Minimum wage, salary	✓ Protection (forest)	✓ Transparency and equity
✓ Worker age	✓ Erosion (surface, steep area)	✓ Traceability
✓ Education conflict, minor worker	✓ Diversity, protection	✓ Quality
✓ Working environment, facility	✓ Water quality	✓ Safety and GMO
✓ Discrimination	✓ Pesticide	✓ Processing, consistency
✓ Forced labour, abuse	✓ Waste management	
✓ Health and safety		



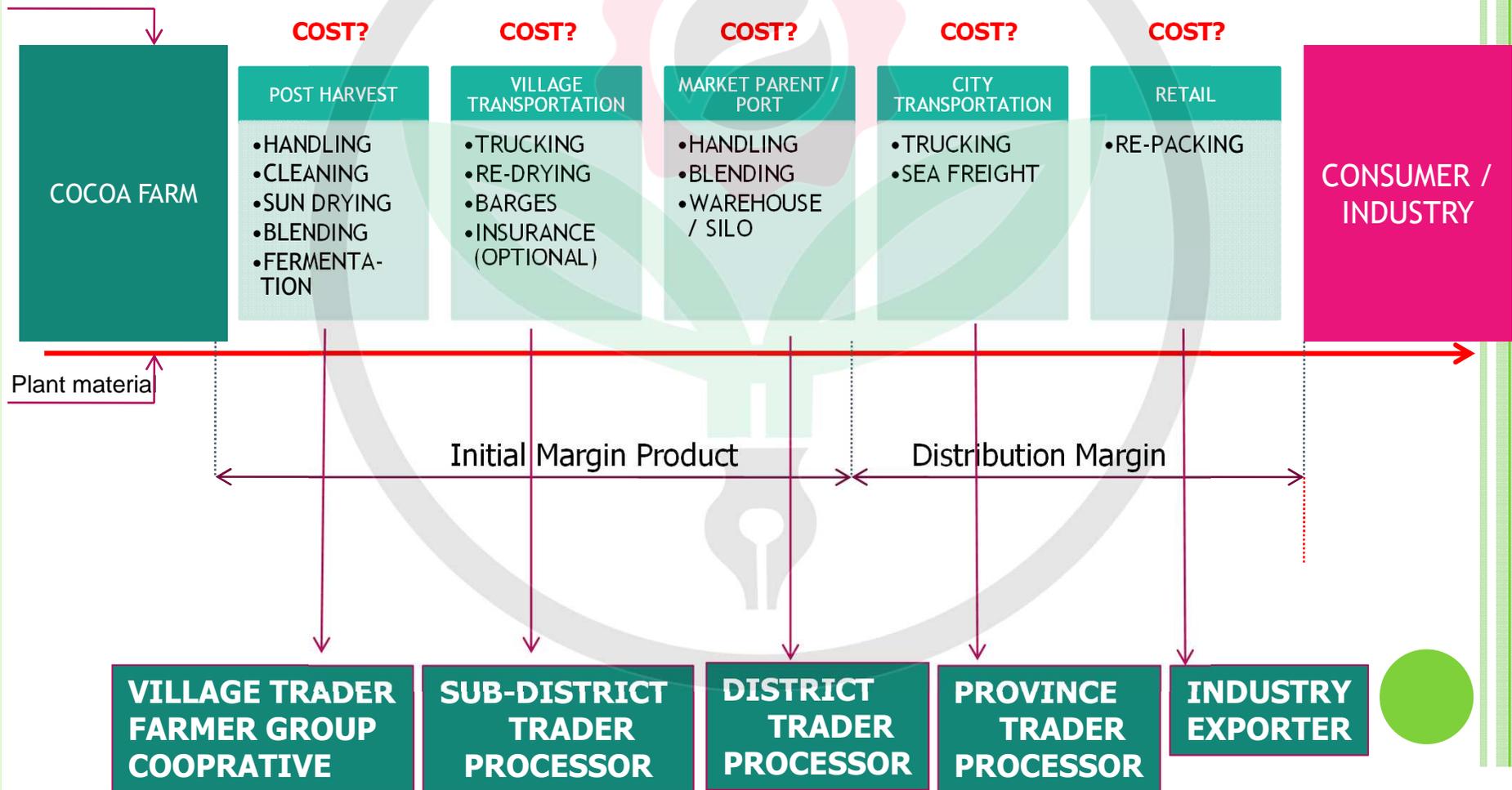
ISU KESEHATAN DAN KEAMANAN PANGAN

- Polycyclic Aromatic Hydrocarbone (PAH) pada biji kakao
- Ochratoxin A (OTA)
- Quality sign + IPR + single origin source
 - menyusul pembatasan residu pestisida (MRL), GMO, logam berat, aflatoksin dll



VALUE CHAIN OF COCOA BEANS

AGRICULTURE PRACTICES



DAYA TARIK PEKEBUNAN, YOUTH INTERESTING

- ❑ PEKERJAAN DI PERKEBUNAN BELUM MENARIK DAN MENJADI DAYA TARIK
- ❑ BAHKAN TIDAK MAMPU MENGURANGI URBANISASI

INDUSTRI PEDESAAN???



PROFITABILITAS



INDONESIA

PRODUKTIVITAS

KUALITAS



APA YANG HARUS DILAKUKAN

TUNTUTAN
+
KEBUTUHAN



INOVASI
+
PROGRAM
+
AKSI



PENUTUP

Keberlanjutan atau *sustainability* kakao, tidak hanya cukup digaungkan sebagai suatu tuntutan untuk memenuhi kriteria-kriteria standar, seperti pemenuhan aspek GAP-GMP yang ramah lingkungan, bertanggung jawab secara social dan profit secara ekonomi semata; tetapi harus secara nyata memberikan keuntungan yang adil bagi para pelaku, di masa kini dan yang akan datang.



Konsep sustainability dan green economy hanya akan berjalan bila didasari dengan pembagian keuntungan yang adil dan memadai. Bermitra dengan prinsip saling menguntungkan, saling percaya dan saling membesarkan. Dan itu hanya bisa dicapai bila semua pemangku kepentingan, baik petani, pedagang, unsur pemerintah, industri/swasta dan LSM bersama-sama menyatukan langkah untuk kemajuan bersama, dengan mengurangi ego-kepentingan masing-masing.



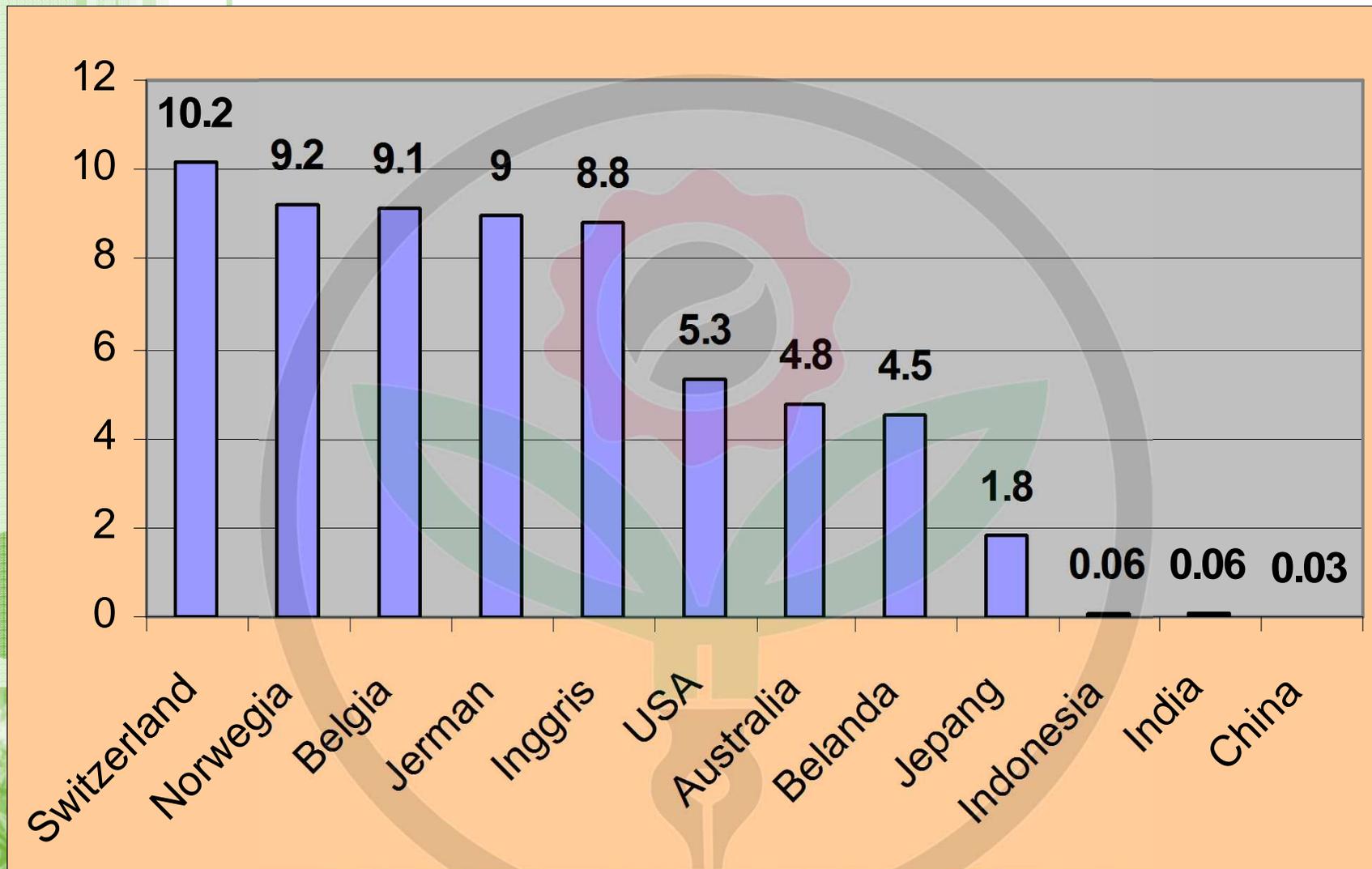
AGRIBISNIS KAKAO FEASIBLE?



Historical cocoa supply & demand



Source: ICCO, Quarterly Bulletin of Cocoa Statistics



MAU AMBIL PELUANG?



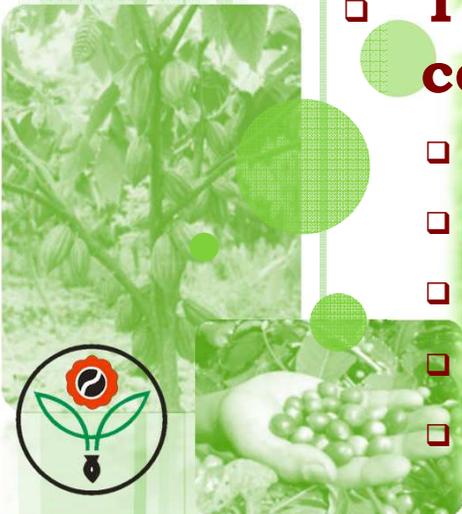
Some quantitative parameters of cocoas

Origin	Bean count (beans/ 100 g)	Shell (%)	Fat content (%)
Cote d'Ivoire main crop	92-105	11.9	56.5
Ghana main crop	90-95	11.3	57.3
Nigerian (pre- 1986)	90-95	11.7	56.8
West African cocoa	93.7	11.8	57.3
Peninsular Malaysia	82-125	16.0	57.0

Heavy Metal Content

Certain heavy metals had been recognized to be potentially toxic, potential hazard exists for human nutrition.

- ❑ **Not all the traces of heavy metals in plants and animals are the results of human activity. Some arise through the absorption processes of naturally occurring soil components**
- ❑ **The defined heavy metal avoided in the cocoa and chocolate products:**
 - ❑ **Pb (Lead),**
 - ❑ **Ni (Nickel),**
 - ❑ **Cd (Cadmium),**
 - ❑ **Hg (Mercury)**
 - ❑ **Cr (Chromium).**



INHERENT REQUIREMENT (MG/KG)

Aflatoksin,B1,B2,C1,C2	0,01	Hexachlorocyclohexane	0,01
Aldrine/Diedrine	0,01	Lead	2,00
Arsenik	0,5	Lindane	1,00
Bromida	50	Cadmium	0,5
Mercury	0,02	Chlorothalonil	0,05
Methacrifos	10,00	Copper+	50
Phosphides	0,01	Cyanides	6,00
Phosphoramidate	0,02	DDT/DDE	0,02
Piperonyl butoxide	1,00	Deltamethrin	0,05
Propylene oxide	300	Dichlorvos	5,00
Pyrethrin	0,50	Fenitrothion	0,10
Fentin	0,1	Hexachlorobenzene	0,05



Cocoa beans

Cocoa bean shells

Chocolate products

Manufactured cocoa



Lead concentration (ng/g)

