INTERNATIONAL PERSPECTIVES ON TROPICAL FOREST INVESTMENT




National Investment Forum for Strengthen Policies and Opportunities for Forest Investment

Manila, Philippines

12-14 August 2009

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO's WORK IN PROMOTING FURTHER INVESTMENT IN TROPICAL FORESTRY

- International Tropical Forest Investment Forum (2006);
- Latin America Tropical Forest Investment Forum (2006):
- Asia-Pacific Tropical Forest Investment Forum (2007);
- Round of National Investment Fora.

MAYOR FINDINGS FROM THE INVESTMENT FORA

- Enabling environment for investment by:
  - securing land tenure and access rights,
  - strengthening forest governance,
  - developing less complex and more equitable taxation,
  - simplifying bureaucracy,
  - adjusting financial incentives for SFM in natural forests in comparison with other land uses,
  - developing appropriate public procurement policies for timber,
  - promoting accessible credit lines for small-medium forest enterprises.

MAYOR FINDINGS FROM THE INVESTMENT FORA

- Forestry operations should be linked to capital markets by:
  - managing forest for multiple uses,
  - developing alternative business models for NTFPs and PES,
  - investing in technology, infrastructure, innovation and productivity improvements.
  - creating a balance between small and large scale enterprises through vertical integration,
  - building capacity to improve the managerial business skills,
  - better marketing of forest products,
  - incorporating social responsibility principles,
  - developing risk insurance mechanisms,
  - considering new financial mechanisms like carbon markets.

DRIVERS FOR CONSIDERING INVESTMENTS AND OTHER FACTORS

- Profitability of the Investment:
  - Internal Rate of Return;
  - Time to offset the capital invested.
- In the tropical forest sector, other factors play a significant role:
  - Deforestation and degradation of natural forests;
  - Legality: wood supply, industry and trade;
  - International, government and consumer responses
    - CITES listings
    - Government procurement policies, CSR policies
    - EU FLEGT measures, VPAs, US Lacey Act amendments
    - Certification and SFM;
- Competition with Engineered Timber Products (from temperate/boreal woods/producers)

GLOBAL ECONOMIC CHANGES

- **Global market downturn from mid-2008: declining construction activity, demand, prices and production;**
- **Rising consumption in producer countries – demographics, GDP;**
- **Public perceptions of tropical wood products influencing demand;**
- **Changes in relative competitiveness of SPWP producers – costs of production, transport, ERs, substitution.**

Time for crisis is also time for <u>Opportunities:</u>

- Increase forest productivity
  - Plantation / Intensive management
- Increase industrial productivity
  - New Technologies
  - Reduce / use wastes

PLANTED FOREST

SUPPLY (POTENTIAL)

3.9 Billion m³/year

PRODUCTION FORESTS

30% ?

1.2 Billion m³/year

NATURAL FORESTS COVER AROUND 30% OF DEMAND

(Source: STCP, Brazil)

TROPICAL FOREST PLANTATIONS

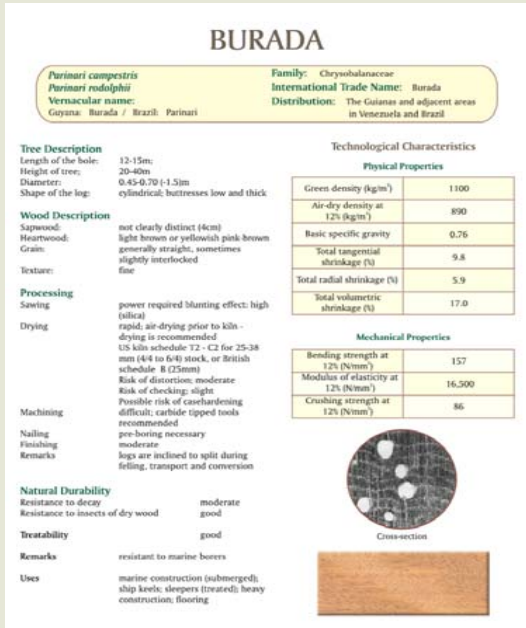
REGION	AREA OF PRODUCTIVE FOREST PLANTATIONS[1] (000 hectares)	ROUNDWOOD PRODUCTION FROM PLANTATIONS, 2004[2] (000 m^3)	PLANTATION SHARE OF ROUNDWOOD PRODUCTION[2] (%)
Asia-Pacific	26 640	66 800	46.1
Africa	3 528	3 580	8.0
Latin America & Caribbean	8 036	84 900	63.4
TOTAL	36 136	155 280	47.9

(1) Source: FAO 2005 adapted by STCP

(2) Source: STCP fieldwork

LESSER USED WOOD SPECIES

- Review of properties of LUS:
  - Marine construction,
  - Heavy structural applications,
  - Decking / cladding.
- Resistance of the species to:
  - Abrasion & Marine borer,
  - Natural durability.
- Provide information to the market on LUS:
  - Tree and wood description,
  - Processing requirements: sawing, drying, machining, nailing
  - Natural durability,
  - Treatability,
  - Uses
  - Physical and mechanical properties



BURADA

Parinari campestris
Parinari rodolphii
Vernacular name:
Guyana: Burada / Brazil: Parinari

Family: Chrysobalanaceae
International Trade Name: Burada
Distribution: The Guianas and adjacent areas in Venezuela and Brazil

Tree Description

Length of the bole:	12-15m;
Height of tree;	20-40m
Diameter:	0.45-0.70 (-1.5)m
Shape of the log:	cylindrical; buttresses low and thick

Wood Description

Sapwood:	not clearly distinct (4cm)
Heartwood:	light brown or yellowish pink-brown
Grain:	generally straight, sometimes slightly interlocked
Texture:	fine

Processing

Sawing	power required blunting effect: high (silica)
Drying	rapid; air-drying prior to kiln - drying is recommended US kiln schedule T2 - C2 for 25-38 mm (4/4 to 6/4) stock, or British schedule B (25mm) Risk of distortion; moderate Risk of checking; slight Possible risk of casehardening
Machining	difficult; carbide tipped tools recommended
Nailing	pre-boring necessary
Finishing	moderate
Remarks	logs are inclined to split during felling, transport and conversion

Natural Durability

Resistance to decay	moderate
Resistance to insects of dry wood	good
Treatability	good
Remarks	resistant to marine borers
Uses	marine construction (submerged); ship keels; sleepers (treated); heavy construction; flooring

Technological Characteristics

Physical Properties

Green density (kg/m³)	1100
Air-dry density at 12% (kg/m³)	890
Basic specific gravity	0.76
Total tangential shrinkage (%)	9.8
Total radial shrinkage (%)	5.9
Total volumetric shrinkage (%)	17.0

Mechanical Properties

Bending strength at 12% (N/mm²)	157
Modulus of elasticity at 12% (N/mm²)	16,500
Crushing strength at 12% (N/mm²)	86

Cross-section

LESSER USED WOOD SPECIES






Examples of products (flooring, decking, framing, sawn wood) processed with LUS Pucté (*Bucida buceras*), Manchiche (*Lonchocarpus castilloi*) Santa Maria, (*Callophylum basiliense*) Danto (*Vatairea lundelli*) y Jobillo (*Astronium graveolens*), in Guatemala with markets in USA and Holland

ADDING VALUE AT THE FOREST

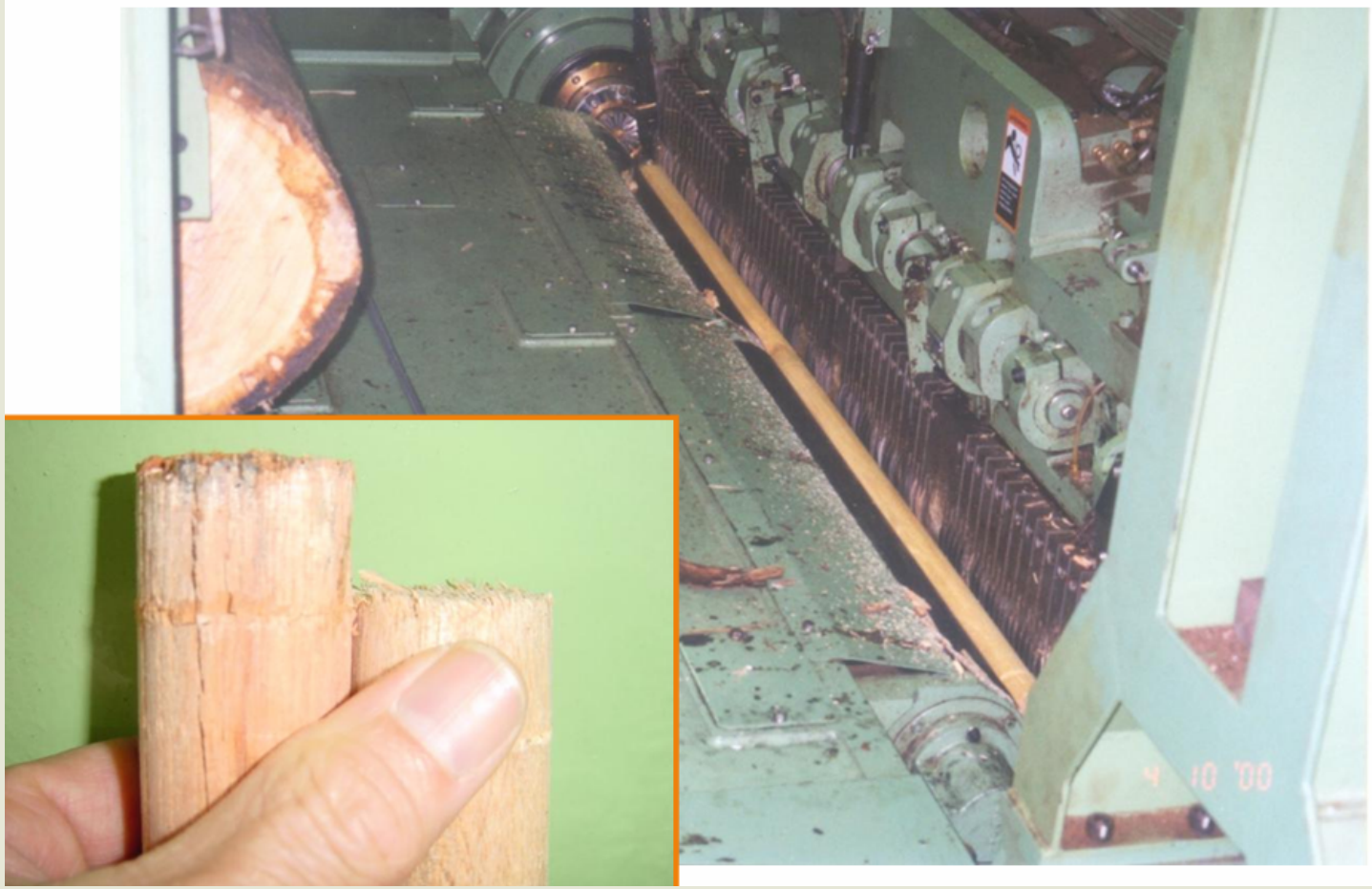
PD 233/03 Rev.2 (I)
Application of Intermediate Technologies for Sustainable Forest Harvesting (Peru)

- The project aims to strengthen the forest concession process by using intermediate technologies for harvesting:
  - •Promotion of intermediate technologies for forest harvesting (portable sawn-millers),
  - •Financial mechanism for the acquisition of the technology,
  - •Business and managerial assistance;

Relocation of primary processing closer to the raw material producers

INCREASE EFFICIENCY OF INDUSTRIALIZATION

New lathes produce small cores



USE/REDUCE OF WASTE

- **<u>Forest and industrial operations are selective in terms of raw material</u>**
- **Large quantity of residues are produced along the chain**
  - At the forest
  - At the industry
- **Quantity and quality of ‘unused residues’ vary depending on several factors**
  - Forest (natural or planted)
  - Forest industry development
  - Access to markets
  - Others
- **<u>Transformation of wood residues into market products is ‘the alternative’ to ensure the sustainable development of the tropical timber industry.</u>**

MARKET PRODUCT FROM WOOD RESIDUES: BIOFUEL & BIOENERGY

Wood Residues

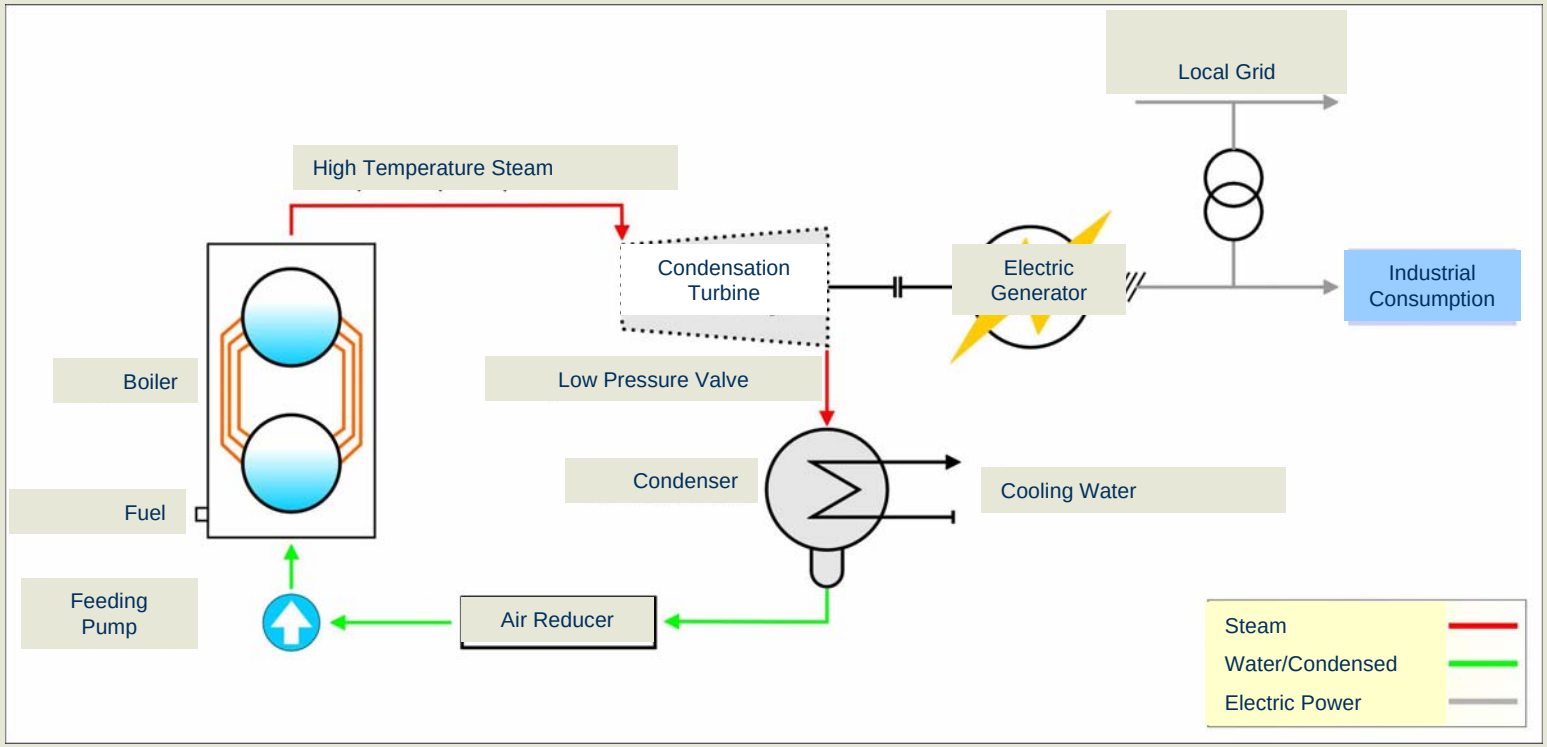
Chipper

Biofuel

→ GOOD MARKET, BUT SCALE AND LOGISTICS ARE FUNDAMENTAL

(Source: STCP, Brazil)

MARKET PRODUCT FROM WOOD RESIDUES: BIOFUEL & BIOENERGY



→ COMPETITIVE ALTERNATIVE UNDER CERTAIN CONDITIONS

(Source: STCP, Brazil)

MARKET PRODUCTS FROM WOOD RESIDUES: CHARCOAL FOR DOMESTIC AND INDUSTRIAL USE

Charcoal Consumption in Brazil

→ LARGE AND EXPANDING MARKET IN SOME COUNTRIES (Brazil, Cote d'Ivoire, etc.)

MARKET PRODUCTS FROM WOOD RESIDUES: BIO-POLYMERS (COMPOSITE)

- Bio-polymers:
  - Composites for several applications;
  - Today, the loading rate in wood can reach 70%

Source: CIRAD

MARKET PRODUCTS FROM WOOD RESIDUES: BIO-POLYMERS (COMPOSITE)

- Reconstituted laminated solid wood:
  - Assembly massive pieces by gluing small pieces of wood

Source: CIRAD

VALORIZATION OF NTFPs

- Focus on forest dependent peoples, income generation, pro-poor actions, more environmental, friendly uses & forest conservation and to avoid deforestation;
  - FOODS: bushmeat, insects, nuts, gums, honey, syrups, oils, vegetables, fruits, mushrooms, spices, beverages, medicinals,fodder;
  - FIBRES: bamboo, rattan, cork, lianas, bark, kapok, sisal, fuelwood, charcoal, silk, skins;
  - CHEMICALS: resins, gums, latexes, aromatics, lac, insecticides,tannins, dyes, essential oils, waxes, wood tar;
  - ORNAMENTALS: live/dried organisms - plants, trophies;
  - SERVICES: water, eco-tourism, hunting, biodiversity, carbon stock, cultural/religious.

Source: FAO

NTFPs (plant products) 2005 *(1000 tonnes)*

Region	Food	Medicinal Aromatic	Exudates	Others
Asia	3 563	90	1 496	607
S. America	348	2	17	292
Europe	272	7	2	232
Africa	89	20	13	11
N. America	6	3	39	149
Oceania	-	-	-	6
World	4 279	122	1 567	1 297

World production approx. 7 Million tones (US$ 5 Billion)

Source: FAO

VALORIZATION OF NTFPs

- Brazilian nuts;
- Acai (energy drink);
- Rubber.

The Problem & the Challenge:

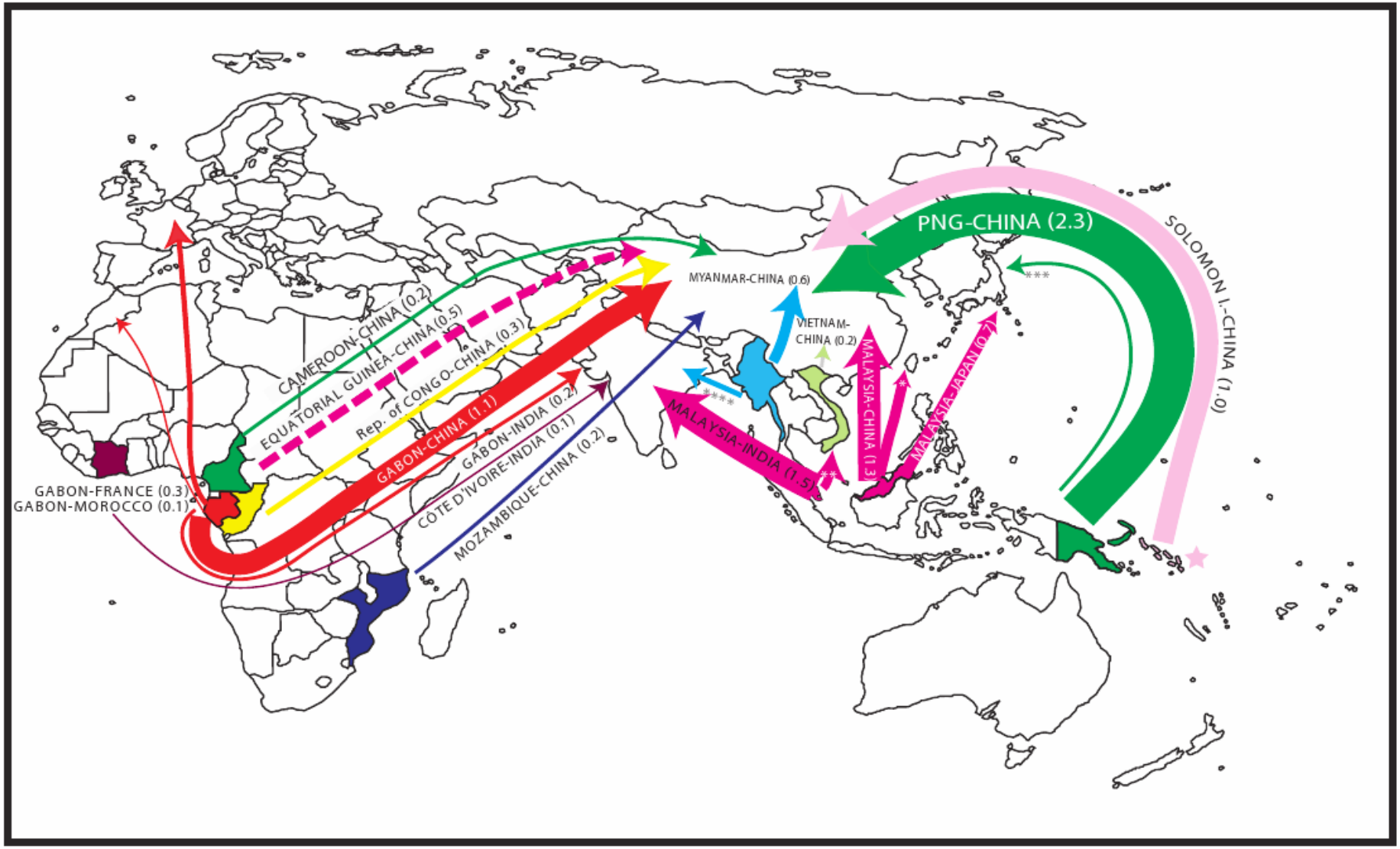
Socio-economics are poorly understood or supported by countries (few have policies or legislation or statistics), which reflects in limited tax income from NTPFs and reduction of the contribution of the forest sector to the National Accounts (GDP).

TRAINING, R&D FOR TROPICAL FOREST INDUSTRIES

- Market demand for south-to-south transfer of:
  - Technology;
  - Skills;
  - Capitals.

- Intra-regional trade

Tropical Industrial Roundwood Directions of Trade, 2007

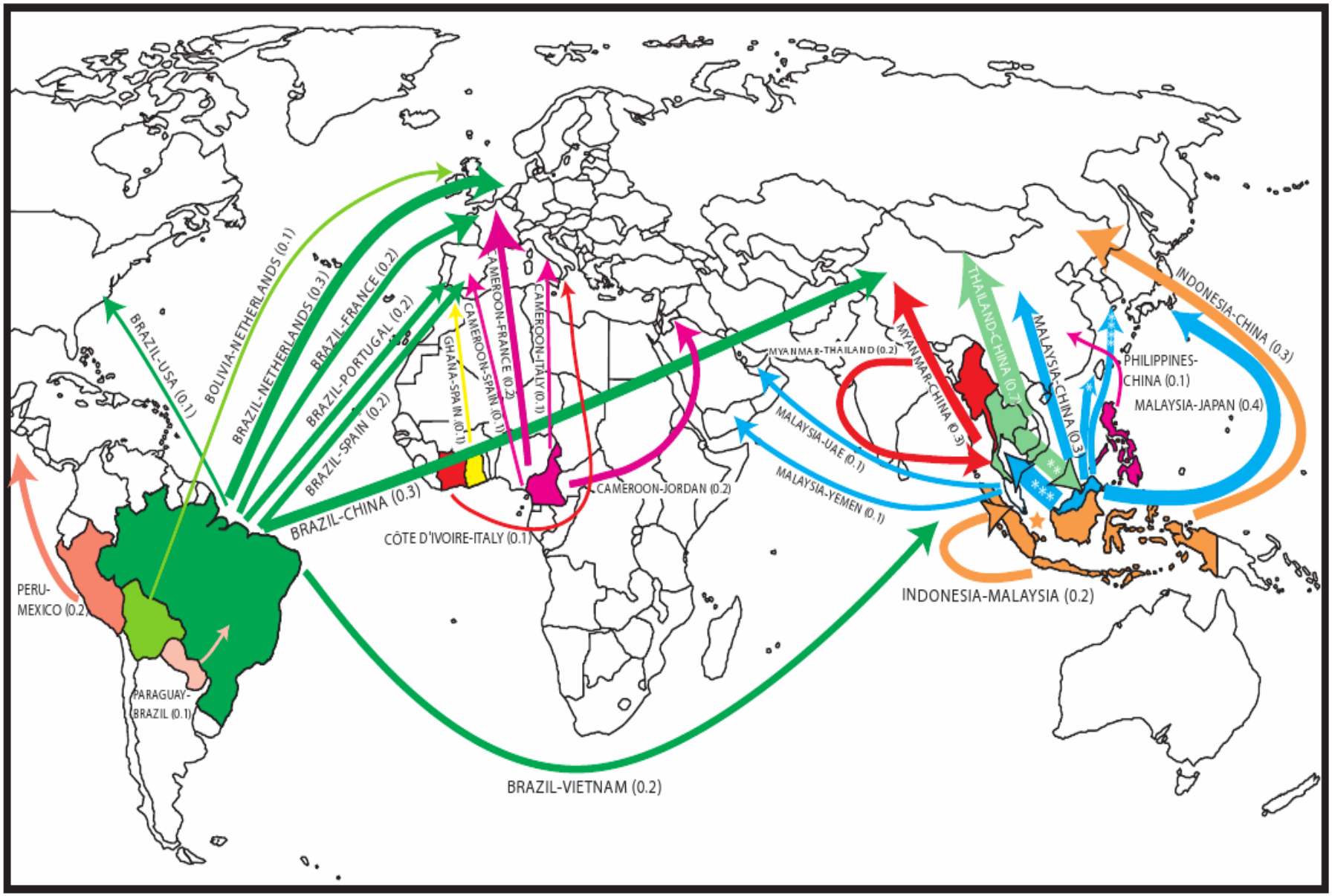


* MALAYSIA-TAIWAN POC (0.5), ** MALAYSIA-VIETNAM (0.4), *** PNG-JAPAN (0.2), **** MYANMAR-INDIA (0.3).

★ SOLOMON I.-JAPAN (0.1), SOLOMON I.-REP. OF KOREA (0.2).

Sources: ITTO, COMTRADE. Major directions of trade as recorded by exporting countries.

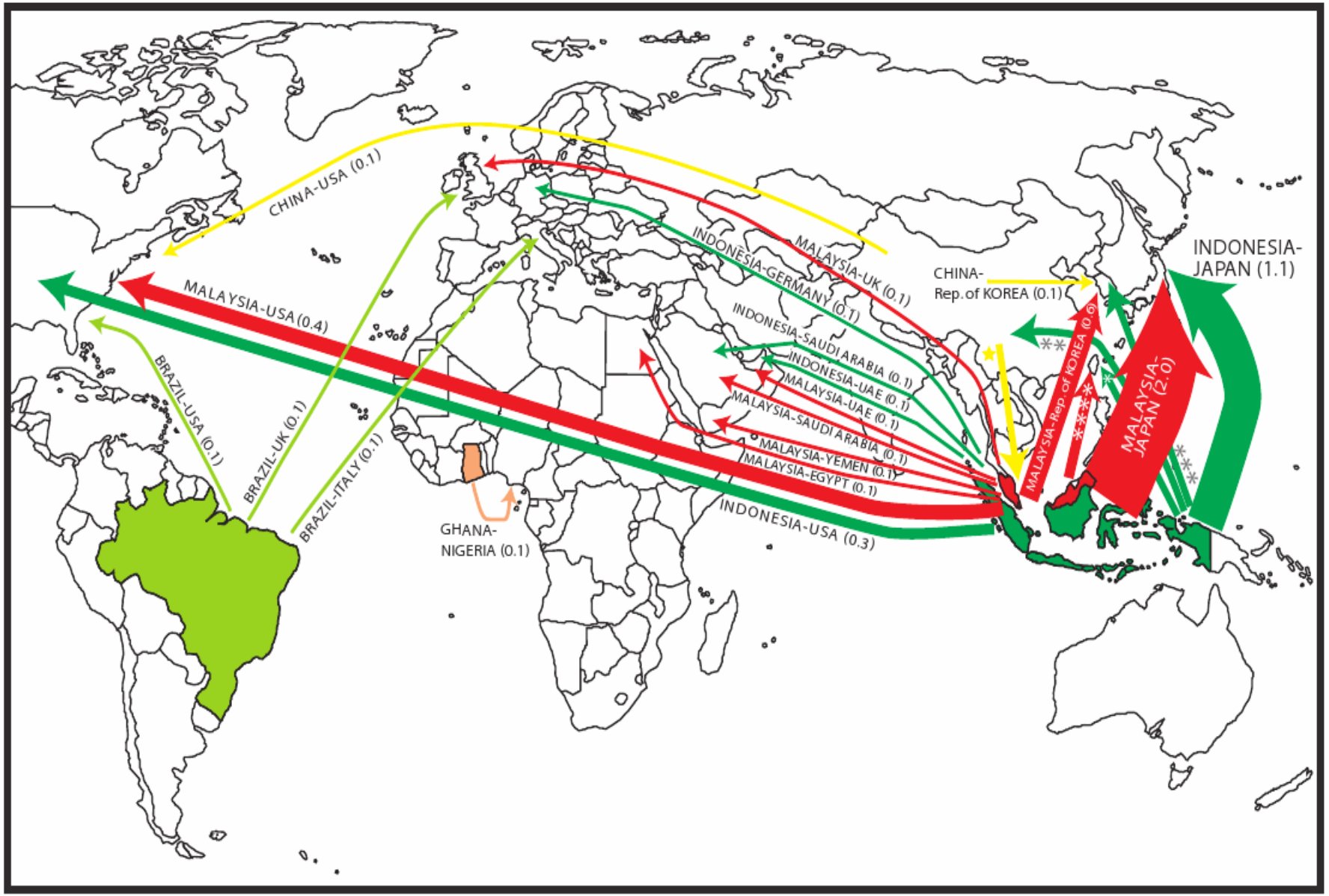
Tropical Sawnwood Directions of Trade, 2007



*MALAYSIA-TAIWAN POC (0.2), **THAILAND-MALAYSIA (0.6), ***MALAYSIA-THAILAND (0.6), ****MALAYSIA-Rep. of KOREA (0.2), ★MALAYSIA-SINGAPORE (0.2), THAILAND-SINGAPORE (0.2) .

Sources: ITTO, COMTRADE. Major directions of trade as recorded by exporting countries.

Tropical Plywood Directions of Trade, 2007



*INDONESIA-TAIWAN POC (0.2),**INDONESIA-CHINA (0.2),***INDONESIA-Rep. of KOREA (0.2),****MALAYSIA-TAIWAN POC (0.3),★CHINA-SINGAPORE (0.2).
Sources: ITTO, COMTRADE. Major directions of trade as recorded by exporting countries.

Thank you!

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