



Global Wood Trading and Shipping

Wood chip markets

Overview

and

Outlook

Vienna, January, 2009

Agenda



Overview on wood markets

Scope

Current state, trends and outlook on wood markets

Key issues on current and future development

Executive summary



Wood Markets

-

AN OVERVIEW

MagForestry Commissions Wood-Chip Plant and Signs Second Wood-Chip Sales Agreement...



-- Press release --



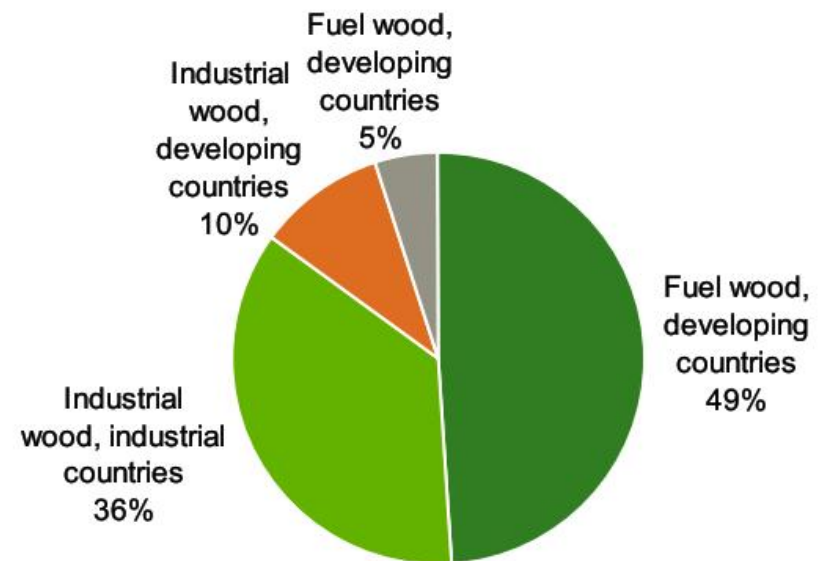
TORONTO, CANADA --June 4, 2008-- *MagForestry Inc., a division of MagIndustries Corp. is pleased to announce the successful commissioning of its \$25 million eucalyptus wood-chipping plant in Pointe-Noire, **Republic of Congo**. The plant will initially operate at a rate of 500,000 tonnes per year (tpy) on a one shift per-day basis. The de-barked eucalyptus logs will be provided in 6 meter lengths from the **forestry operations** of Eucalyptus Fibre Congo SA (EFC) which is owned 100% by MagForestry.*

*In addition MagForestry is pleased to announce a second **wood-chip sales agreement to a major European pulp and paper producer**. This new agreement calls for the delivery of an aggregate of 140,000 tonnes of wood chips over the next 24 months on an FOB basis. The purchaser has an option to extend the contract for an additional two years at prices to be negotiated. This brings the total contracted sales volume of wood-chips to 400,000 tpy. Shipping of chips is expected to start in the **third quarter of 2008**.*

Renewable resource WOOD



- **WOOD as a renewable resource is supplying a wide variety of human life**
 - **Energy (> 50% of global harvested wood)**
 - **Packaging and Paper**
 - **Building & construction industry, furniture industry... (solid and board)**
- **Overall annual cut: 3 billion m³**



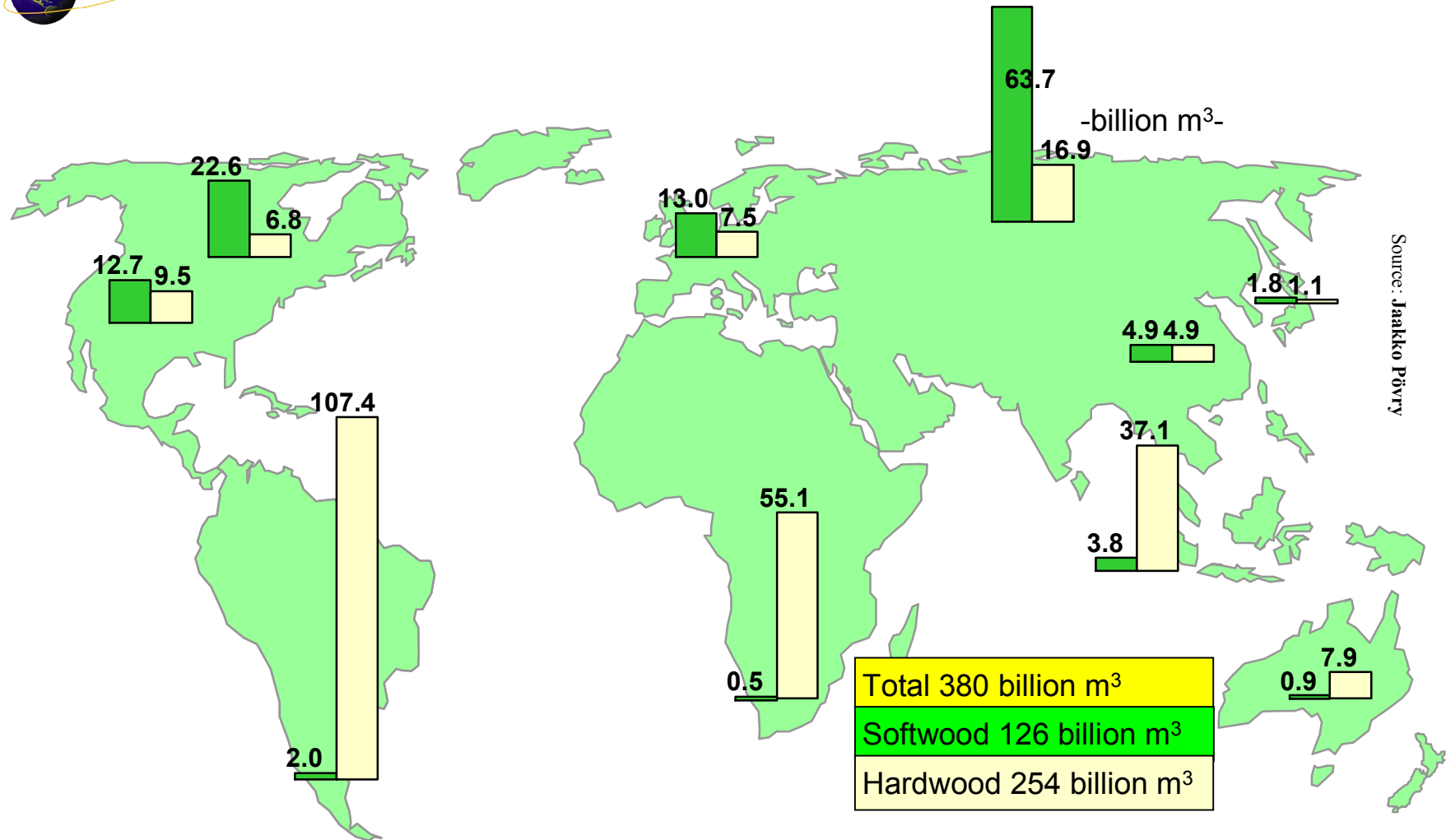
Source: FAO

1,5 out of 3 billion m³ of wood harvested, transported and used like this...



Photo: ÖÖ Nachrichten 14.6.2008

Wood sources



Source: Jaakko Pöyry

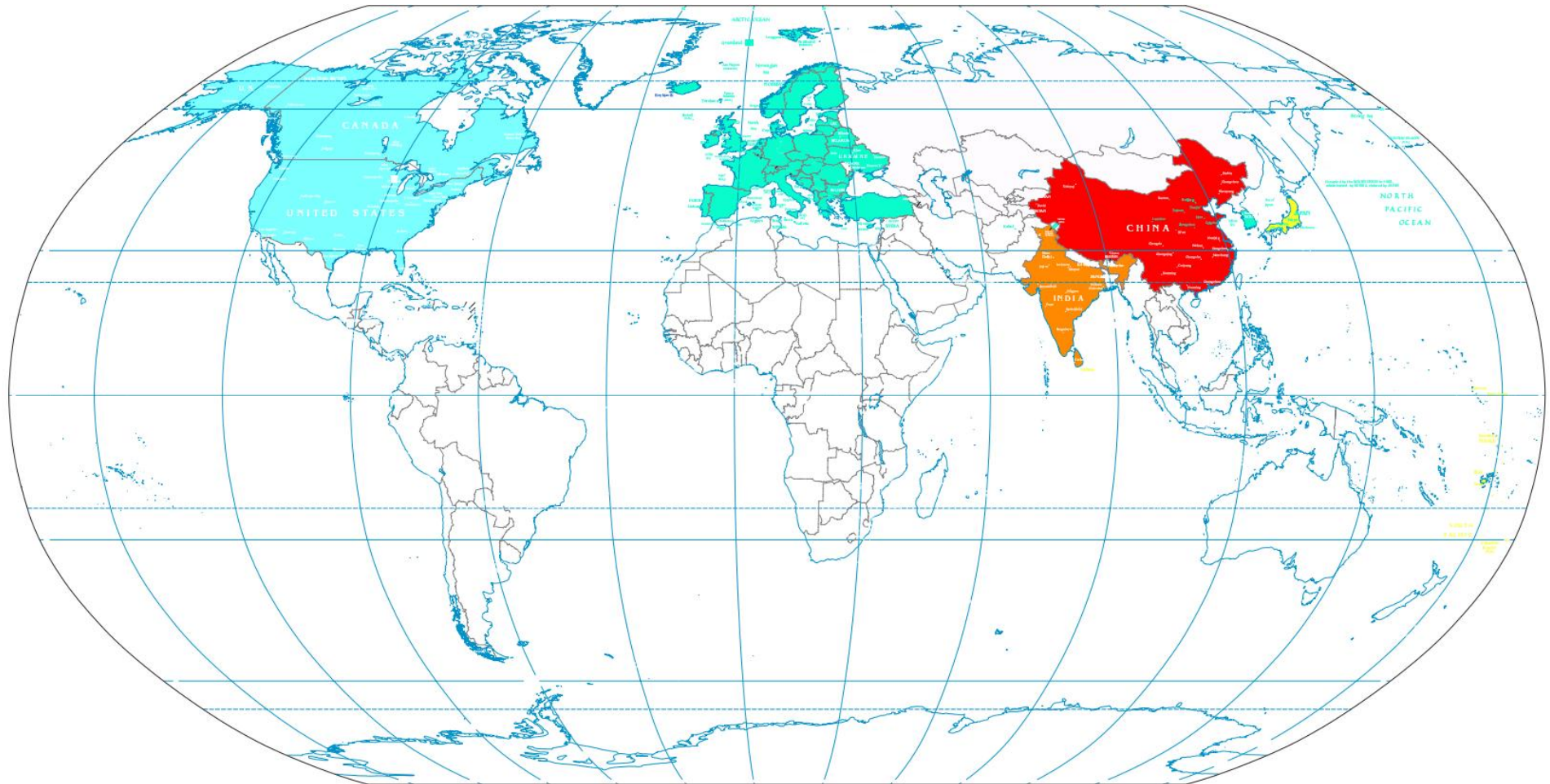
(Wood) production pre-conditions



	Emerged markets northern hemisphere	Emerging markets southern hemisphere
Annual growth	7 m ³ /ha	20 m ³ /ha
Rotation cycle	80 – 100 years	7 – 20 years
Wood type	Softwood	Hardwood
Labor costs	High to extremely high	Low
Environmental regulations	High, still increasing	Low
Socio-political environment	Stable	Mostly unstable

- → **Wood productions shifts towards emerging markets of the southern hemisphere**
- → **P&P industry retightens this trend with some delay and modification**

Current and future wood demand markets

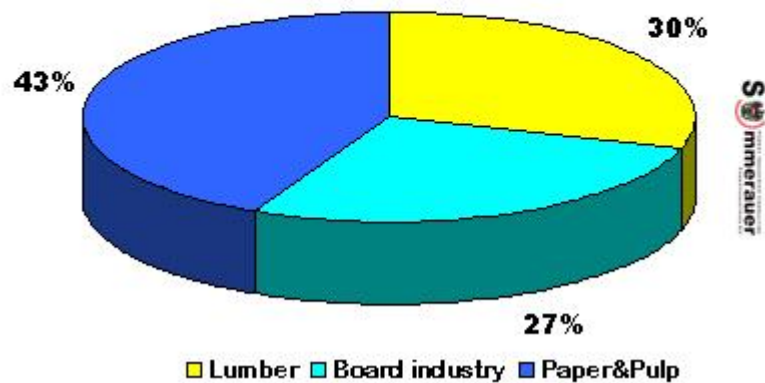


Forest products industry overview



**Global forest products:
Production**

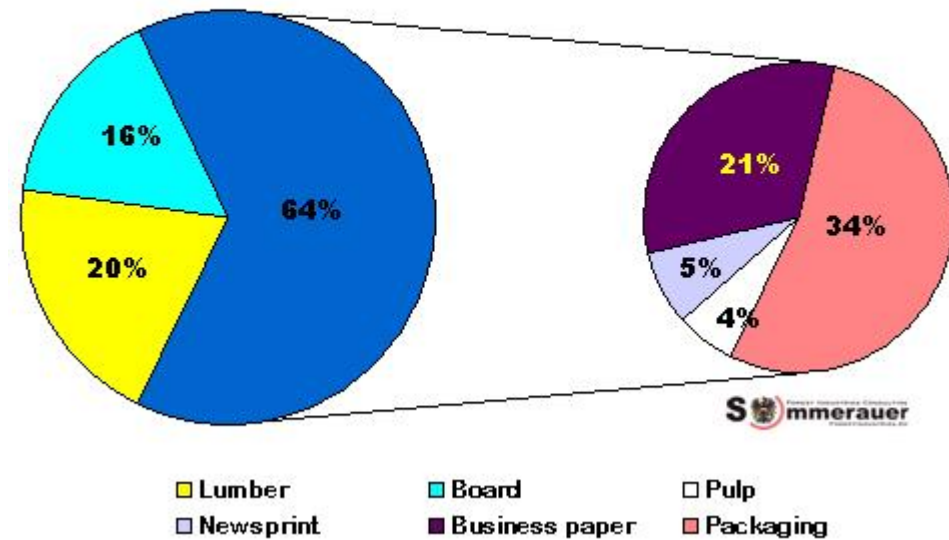
Global annual cut 2004: 1.600 billion m³

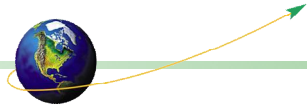


Global forest products turnover:

Share of industrial sectors

Global turnover 2004: € 345 billion





The scope

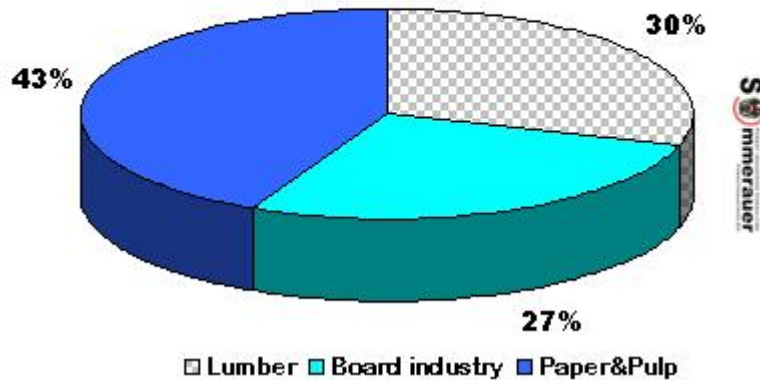
All industrial timber except lumber...



- **In scope remains**
 - **70% of wood volume, 80% of turnaround**
 - **+ xx% biomass fuel**

Global forest products:
Production

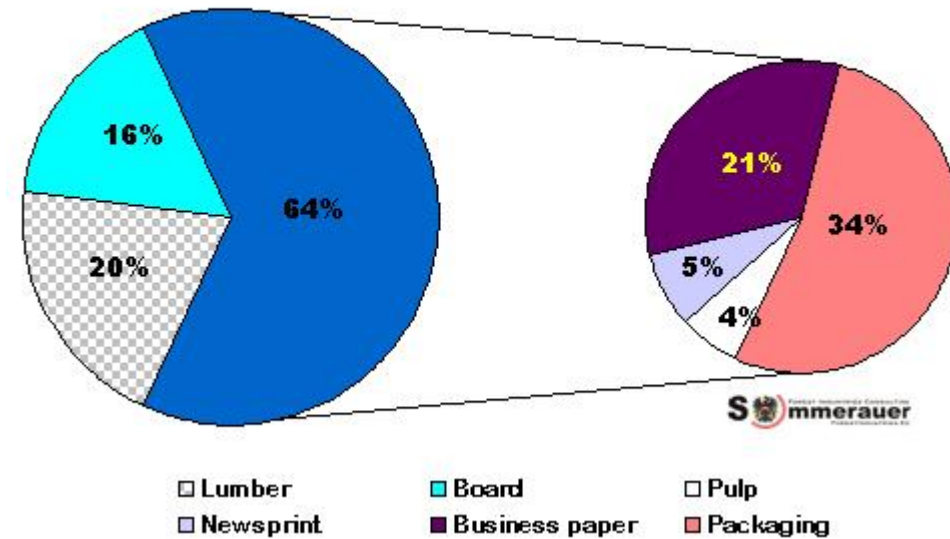
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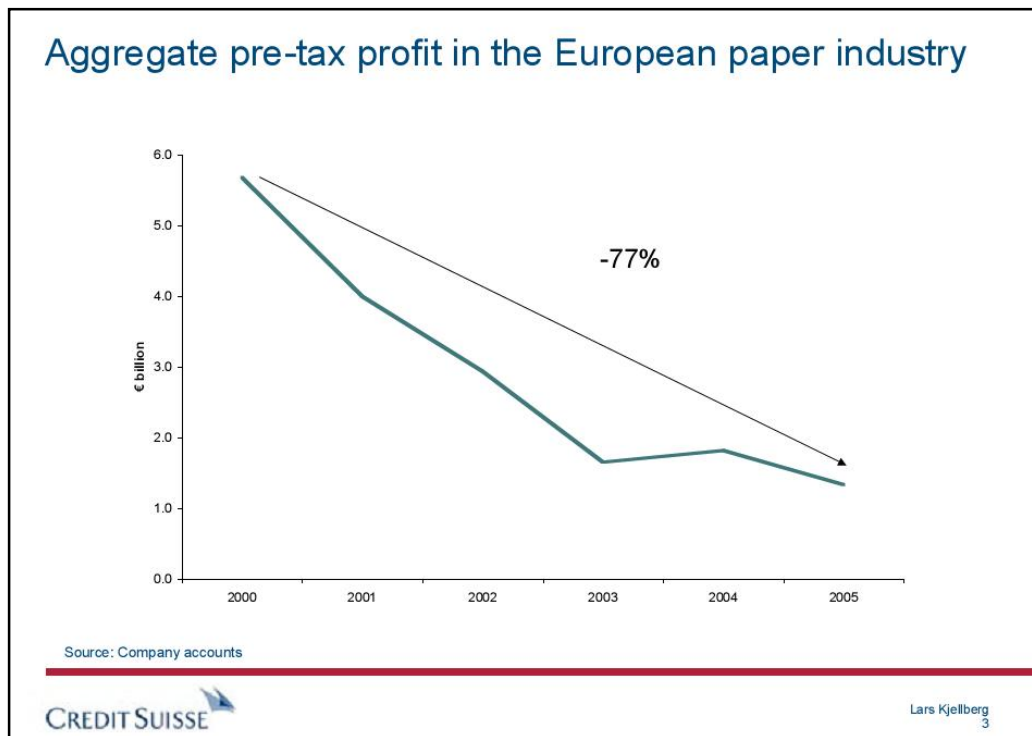
Current state, trends and outlook

Wood demand outlook



- **Three global facts are currently changing wood markets substantially**
 - **Dramatic production cost push within Europe's and North America's Pulp & Paper industry**
 - **The emerging Pulp & Paper market of China and India**
 - **Biomass/renewable energy hype of the EU**
- **A substantial proportion of new wood consumers is entering the market**
 - **Indian and Chinese Pulp & Paper industry**
 - **European power supply industry**

The European perspective



What's about European industry?



Figure 10: Highest Earnings
(US \$ millions)

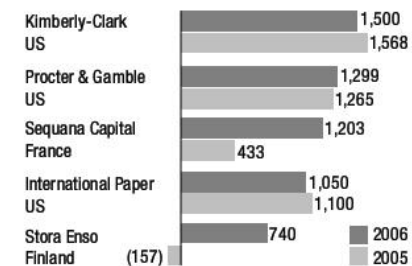
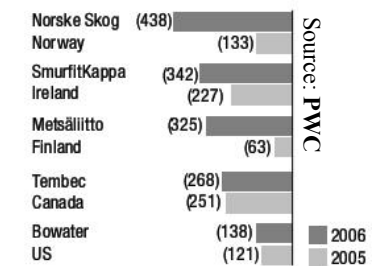


Figure 11: Largest Losses
(US \$ millions)



... and fuel wood?



- **Remember: most fuel wood is utilized in developing countries (mainly for cooking on fireplace; braai) BUT there is some interesting development in Europe**
- **In 2020 EU has to utilize 20% of it's general energy needs out of renewable energy sources (amongst others, from wood as well → surplus of 120 Mio. m³)**
- **In the best case only half of the additional 120 Mio. m³ of fuel wood will be able to be supplied from own forests → remaining 60 Mio. m³ of wood has to be imported** (McKinsey 2008)

Yet...



EU's renewable energy policy example



Port Talbot Renewable Energy plant (100% wood chip fired)



- **Total energy production:** 970 MW
(*Simmering* ~ 62 MW)
- **Electricity:** 350 MW
(*Simmering* ~ 24 MW)
- **Utilized steam:** 0
(*Simmering:* ~ 37 MW)
- **Efficiency_{el}:** 36%
(*Simmering* ~ 25%)
- **Efficiency_{total}:** 36%
(*Simmering* > 90%)
- **Wood chip demand:** ~ 3 Mio. fm
(*Simmering* ~ 240.000 fm)
- **100% wood chip supply by vessel transport from outside of the EU**

Another new trend is rising...

...Timberland Investments



- **Latest PWC study brought it to light:
~15% of all new investments of the Pulp & Paper industry done in the southern hemisphere was financed by private equity funds**
- **Forestry has become an attractive asset for mid to long term investors like**
 - **Insurance companies**
 - **Reinsurances**
 - **Public and private pension organizations**
 - **Trusts/private wealth managers**
- **Most of this money is crossing the equator (is going from North to South)**

Summarizing the outlook



- **Wood production shifts towards South**
 - **Those countries in the northern region being able to produce cheap timber (e.g. Russia) are establishing rigorous export constraints**
- **Paper & Pulp Industry is currently struggling with future strategy**
 - **Some have shifted to south**
 - **Others are thinking about a model similar to Port Talbot**
- **Nevertheless all current and future demand markets will be north of the equator and will be extremely short on wood: China, India, Europe, Japan**

Facts and figures – current state



- **Global wood chip trade**
 - **Current: ~ 31 Mill. BDMT (increased since 2003 for more than 30%)**
 - **2020: ?**
- **Pacific RIM wood chip trade**
 - **Current: ~ 15 Mill. BDMT**
 - **2010: ~ 19 Mill. BDMT (+30%)**
- **Some examples on increase**
 - **Vietnam from 0,4 to 1,8 Mill BDMT within the last 6 years**
 - **Uruguay from 0 to 1 Mill BDMT within the last 5 years**
 - **Uruguay from 0 to 1,7 Mill m³ of logs to Portugal, France, Spain**

Mind the gap...



- **EU is finally lacking 30 mil. BDMT/year of fire wood chips in 2020 (because of its biomass strategy)**
 - **Chips will not come from Russia (because of the new export duties) → Overseas transport will be the main source**
- **India and China will have to import ~ 150 mil. BDMT/year of wood chips for Pulp, Paper & Board industry in 2020**
 - **Only overseas transport is possible**
- **Old-established Pulp & Paper industry in Europe and North America will increasingly import wood chips instead of buying chips from domestic markets because of high domestic Fibre prices and high truck/rail transport costs**
 - **Source of wood is once again: overseas**

But there is other serious opinions as well...



Over the long-term, it can be expected that trade of wood chips will decline as more pulp capacity will be added in regions with fast-growing plantations and pulpwood will be consumed locally

Wood Resources International, May 2008

But I doubt this will happen...

As of now... (almost)

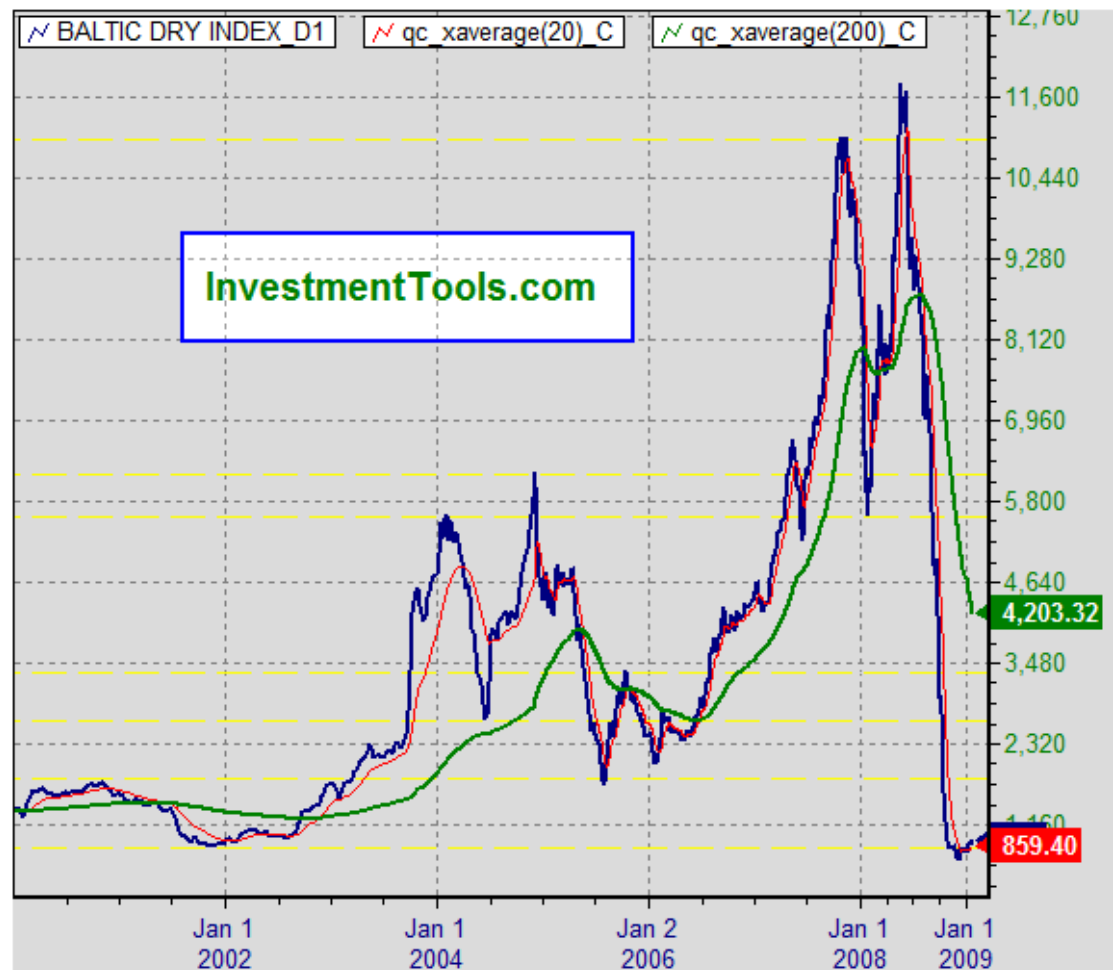


Chart created with NeoTicker EOD © 1998-2007 TickQuest Inc.

The white knuckle collapse of the Baltic Dry Exchange Index will



- **...speed up the still ongoing reassembling of the global timber flows**
- **...cause the analysts to re-think their forecasts**
- **...have implications on Russia's timber export taxes (postponed)**
- **...give European and North American pulp & paper industry a new opportunity to restart**
- **...be an opportunity for European power supply industry**



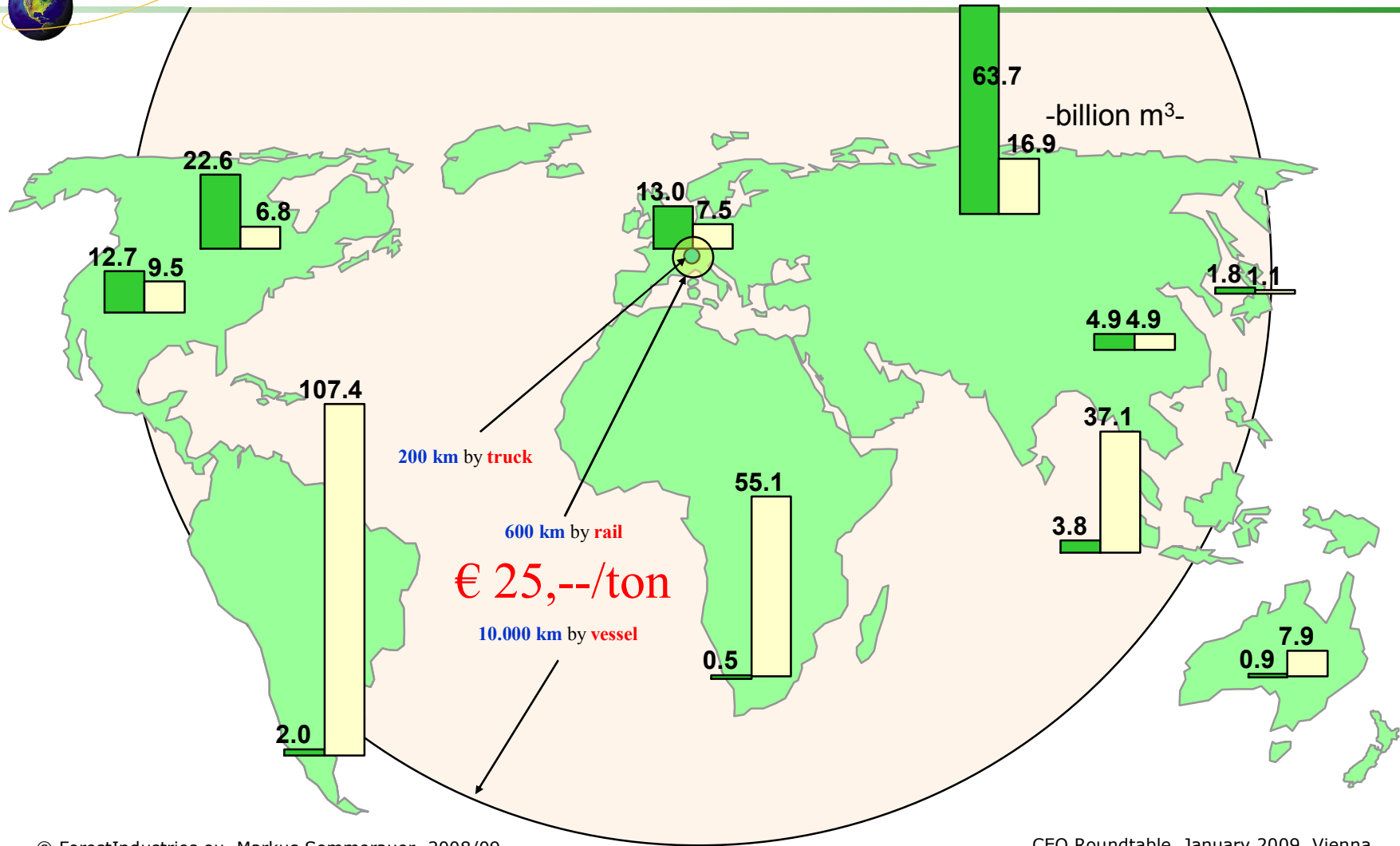
The challenge

How to transport wood

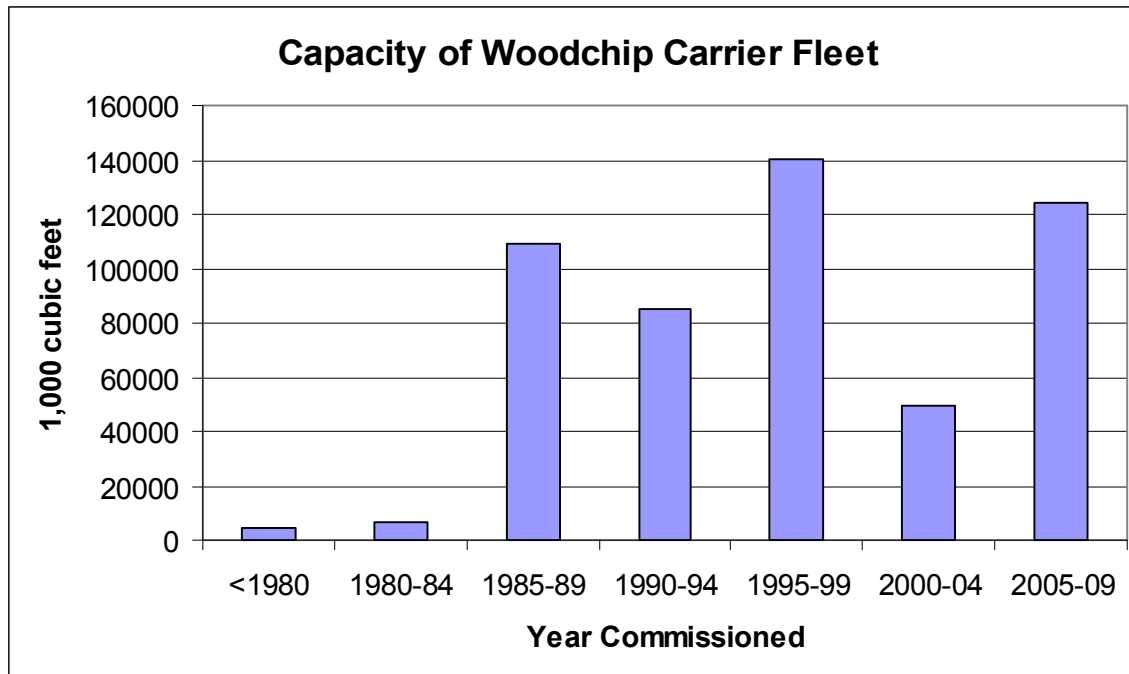


- **Wood can be transported**
 - **As round wood (logs/trunks of a tree) or**
 - **As chips**
- **Main wood transport is done by chips, because**
 - **Easier to handle**
 - **More efficient to transport**
 - **Processing at customers plants**
- **TREND:**
 - Transported chips quantities are raising –**
 - Transported roundwood quantities are falling off...**

Sea transport vs. land transport



Overseas wood chip transports



In early 2005 there were 116 woodchip carriers in use, although some were used in other trade. Most were built in Japanese shipyards and most are under long term (10-15 years) contract with Japanese paper companies or trading companies

- Between 2005 and 2009, 32 new specialized woodchip carriers will come into service

- Probably the 4 oldest vessels will be retired soon → quite unlikely

- Total capacity of the fleet will expand by more than 30% → much too less

- But there is and there will be a substantial shortage on transport capacity**

Wood chip vessel fleet overview



- **Old-established Pulp & Paper industry is mainly shipping wood chips by chartered spot market vessels**
- **Each Japanese P&P industry runs their own vessel fleet and trading division**
- **APRIL (Asia Pacific Resources International Holdings Ltd) e.g. is currently busy establishing an own wood chips logistics division**
- **The main wood chip sea transport is highly scattered and even the European power industry does not have any glue on how to procure the future wood chip demand... (see “Port Talbot” example)**



Executive summary

Executive summary



- **There will be substantial growth on wood chip**
 - **demand** (emerging markets of China and India, EU renewable energy policy) **as well as** on wood chip
 - **supply** (from southern hemisphere because of lower costs and increasing timberland investments)
- **This will increase overseas transport needs to compensate the geographical mismatch**
- **Currently there is a sever shortage on overseas wood chip transport capacity**
- ***A global acting wood trading and shipping company which is able to overcome the former and expected shortage and will utilize the current depression in shipping capacity could be of high strategic interest...***