Global Timberlization Movement
and
Expectation on Durable Eucalyptus

Sumitomo Forestry Co. Ltd., JAPAN
Tsukuba Research Institute
Senior Researcher
Tomo Kakitani (Ph.D)
KAKITANI_tomo@star.sfc.co.jp
Outline of Sumitomo Forestry
Overview

Company name: Sumitomo Forestry Co., Ltd.
Foundation: 1948
Start-up: 1691 (as predecessor of Sumitomo)
Employee: 17,001
Sales: 12 billion USD
Group company: 110 (overseas 76)
Business: Forest management, International trading, Homebuilding, Real-estate, Large-scale timber building, Building material manufacture

Forest management
Trading
Manufacturing
Housing
Trading (international & domestic)

Unparalleled procurement capability with more than 20-country worldwide network

Timber procurement philosophy and policy for promoting forest preservation across the entire distribution process.
Housing (domestic)

Sumitomo forestry home houses: the top brand in traditional Japanese custom-built detached wooden houses
Housing (overseas)

Providing over 5,000 spec houses in nine states of America as well as in Australia
Real estate development (overseas)

Australia

Hong Kong

China

Vietnam
Manufacturing (overseas)

Increasing production capacity as a manufacturing base of quality timber and building materials, also manufacturing operations augmenting production capacity to meet demand in developing countries.
Approx. 191,000 ha of forest area
(Papua New Guinea: 31,000ha
New Zealand: 35,000ha
Indonesia: 125,000ha)

enables us to supply sustainable forest resources throughout the world.
54 international hubs in 16 countries around Pacific rim

China
Japan
Southeast Asia
North America
Oceania

流れ拠点·事務所: ①バンクーバー ②大連商貿 ③ハブロフスク ④SFシンガポール ⑤SFインドネシア ⑥コタキナバル ⑦SFオーストラリア ⑧アムステルダム ⑨SFベトナム ⑩SFタイ ⑪SFインド

植林事業: ①OBT社 ②MI社 ③WSL社 ④NZ植林会社（2016年8月予定）
製造事業: ①KTI社 ②KTI（プロボリニョ） ③KTI（スラバヤ） ④KTI（サマリンダ） ⑤AST社 ⑥RPI社 ⑦RPI社（ジャカルタ） ⑧SRP社 ⑨NPL社 ⑩Alpine MDF社 ⑪Vina Eco Board ⑫SFNZ ⑬Canyon Creek社 ⑭Mos Lumber Products ⑮PAP社 ⑯SFPL社

住宅事業: ①SFC Homes社 ②CRC社 ③パラゴン上海 ④パラゴン大連 ⑤大連TS ⑥ヘンリー社 ⑦ヘンリーUSA社 ⑧335 Grices Road社 ⑨姫台海外会社 ⑩SF アメリカ ⑪Edgewater Homes社 ⑫Bloomfield Homes社 ⑬Gehan Homes社 ⑭スミリン香港 ⑮Partner Ally ⑯Rainbow Alpha ⑰SFA Land Developments ⑱Creekstone社 ⑲北京金隅装飾 ⑳Annadale ㉑DNS AI社 ㉒ORB社 ㉓Phu Hung Thai新会社（2018年予定）
International hubs (Kiwi version)

- Oceania
- Southeast Asia
- North America
- Japan
- China
The team researches and develops new solutions to improve housing and to better society through the use of forest resources.
Global timberlization movement
Global timberlization movement
cited from http://www.zurtek.net/galeria-finnforest/
Global timberlization movement
cited from *Nikkei Architecture* (2017)
Japanese timberlization movement

New National Olympic Stadium for 2020 TOKYO

cited from http://www.jpnsport.go.jp/newstadium/
Japanese timberlization movement

New National Olympic Stadium for 2020 TOKYO

cited from http://www.jpnsport.go.jp/newstadium/
Japanese timberlization movement
Japanese timberlization movement
A current state of conclusion

The world loves timber construction.

The world is looking for stiff, durable, and sustainable species.

Where can we get such an “all-in-one”? 
Expectation on durable *Eucalyptus*
Does *E. bosistoana* fit for a purpose?

*E. bosistoana* is a super-durable species in Oceania.

However,

Every region has a different climate.
Every region has every different flora and fauna.

What about durability of *E. bosistoana* under Japanese conditions which are known as on the world’s most severe environment for a timber usage?
Attack by termites

Insect damage?

Tiny but annoying creature always looking for something to eat.
Termite test (modified Japanese Industrial Standard K 1571)

The 15 soldiers and 150 workers are supplied for each test cup.
Termite test (modified Japanese Industrial Standard K 1571)

- Radiata Pine
- Japanese Cedar
- Western Red Cedar
- E. bosistoana
Fungus cellar test (modified Japanese Industrial Standard K 1571)

Specially prepared soil with plenty of moisture and nutrients under controlled temperature, which enhances wood rotting fungi activities
Fungus cellar test (modified Japanese Industrial Standard K 1571)

Typical appearance after one year burial
(Left) Walnut, (right-top) Bangkirai (Selangan batu), (right-bottom) E. bosistoana
Estimating lifetime of *E. bosistoana* against decay is too early. Unimproved *E. bosistoana* seems to be durable but not to be as durable as tropical species.
Summary and recommendation

● Termite resistance?
Yes. But an actual outdoor exposure test will give us further confidence.

● Decay resistance?
Yes. But unimproved one might not be as durable as tropical durable species. (but ones from tropical are neither sustainable nor environmental benign)

● Concerns?
Yes. “Growth-stresses” is to be improved for various reasons.
(but this is under improvement by NZDFI)

● Is E. bosistoana “all-in-one”?
Yes. It can be called as so in Japan.

● Recommendable?
Yes. “Let’s move forward to the next step”.
Ka Pai and Arigatou

Thanks for your listening