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Economic value of bamboo through value addition: Basics and market perspectives

By

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.

moso[®]

**bamboo
products**



Economic value of bamboo through value addition

Basics and Market perspectives

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Moso International BV





Basics



12-10-2022

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Basics



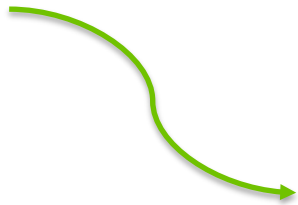
- Species
- Properties

Basics

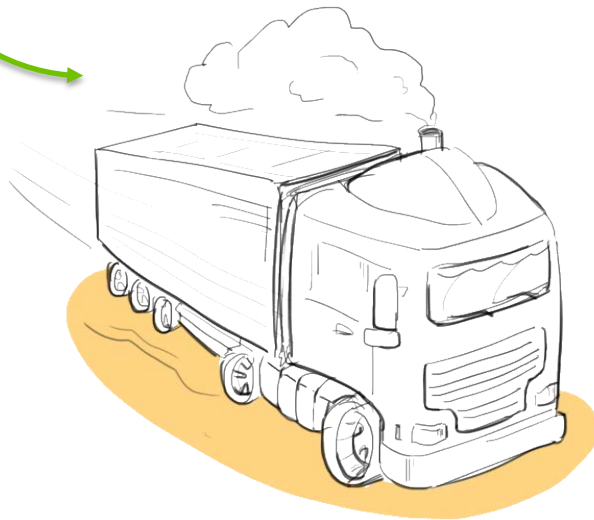


- Species
- Properties
- Amount of resource
- Annual yield

Basics

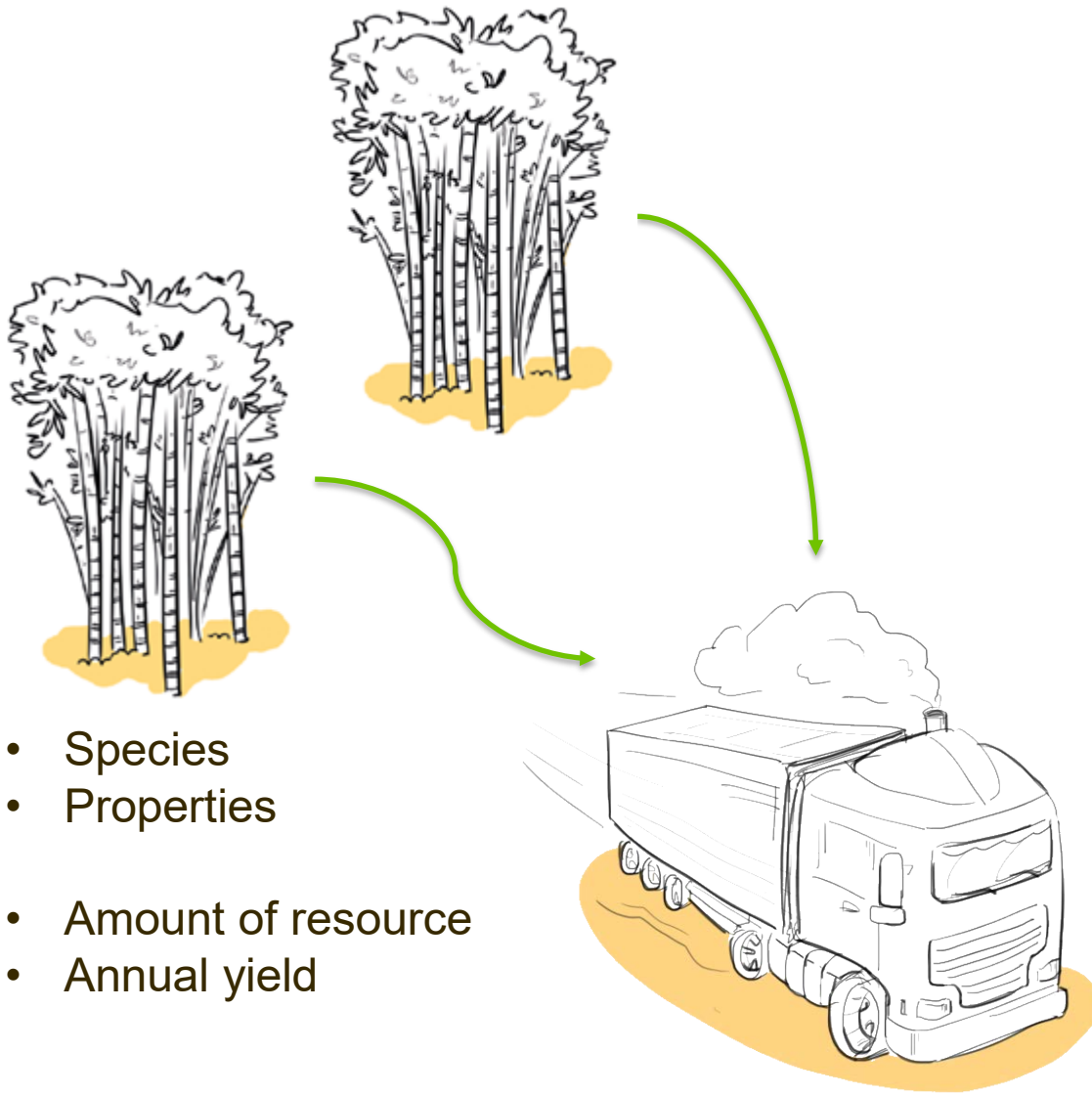


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- Local transport

Basics



- Species
- Properties

- Amount of resource
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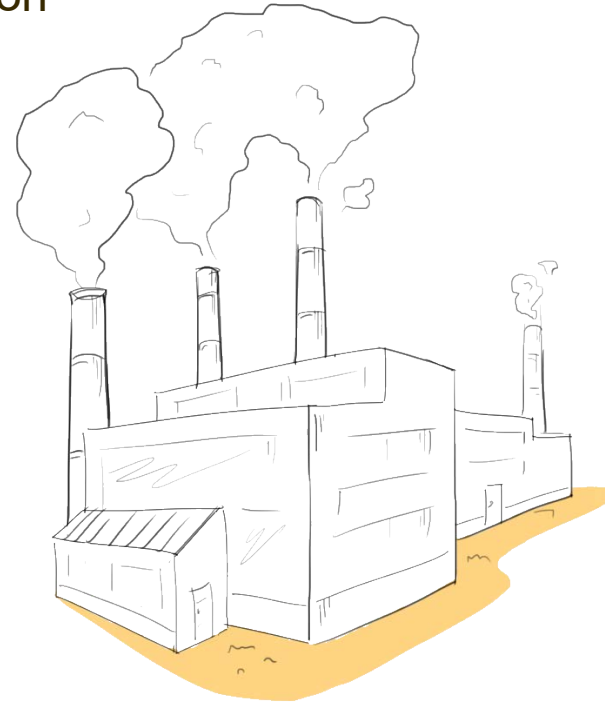
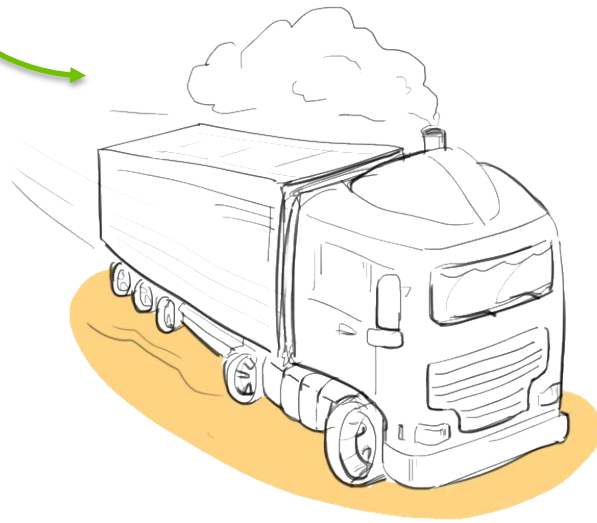
- Local transport

Basics

- Existing production (bamboo/wood)
- New production



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Basics

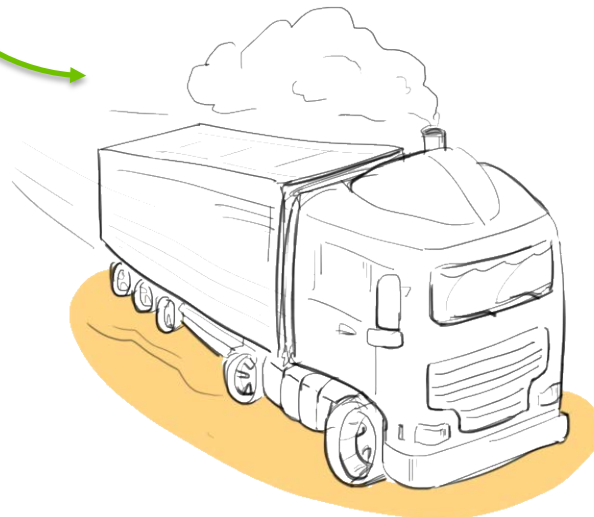
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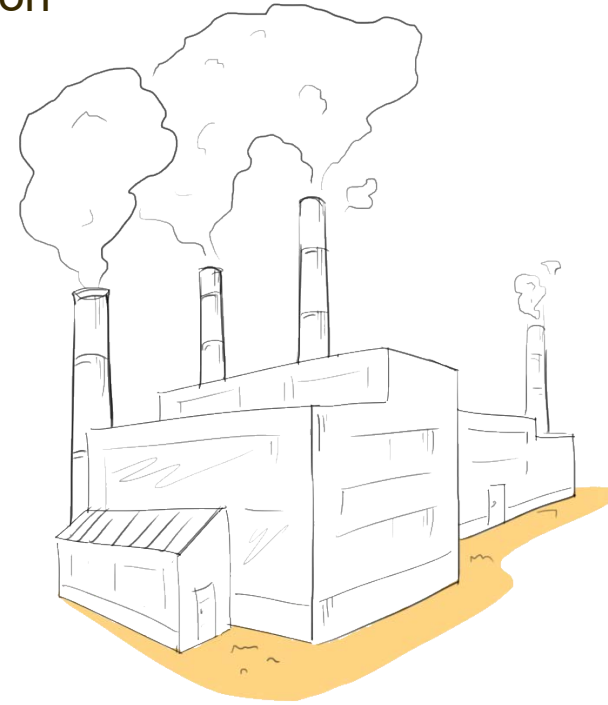
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- Other components



- Local transport



Basics

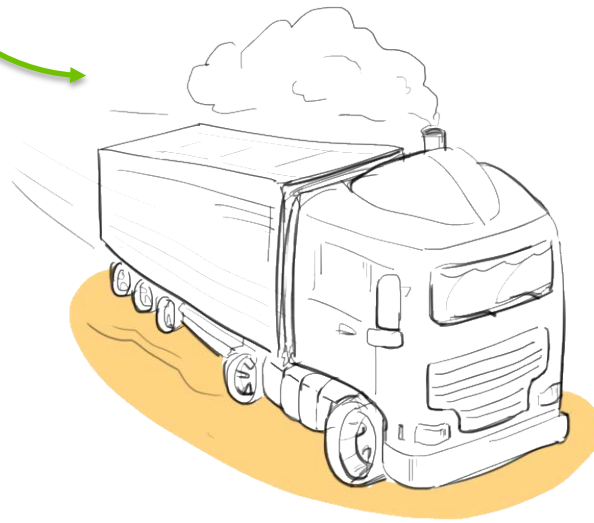
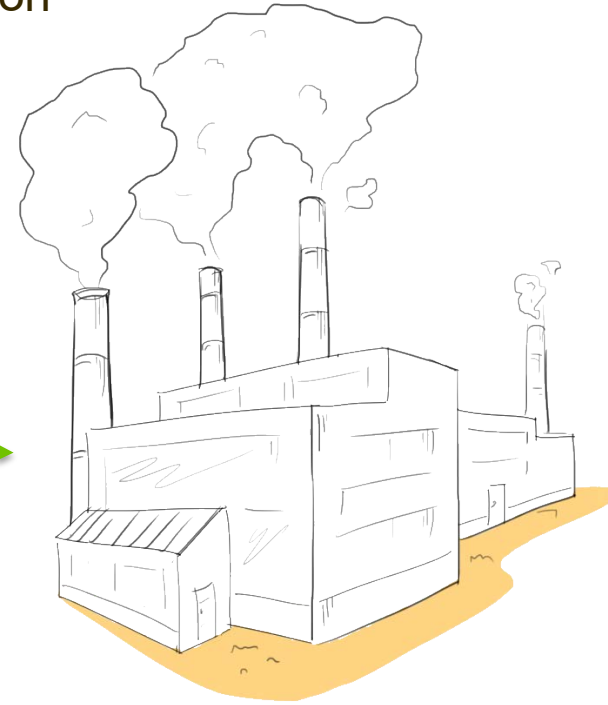
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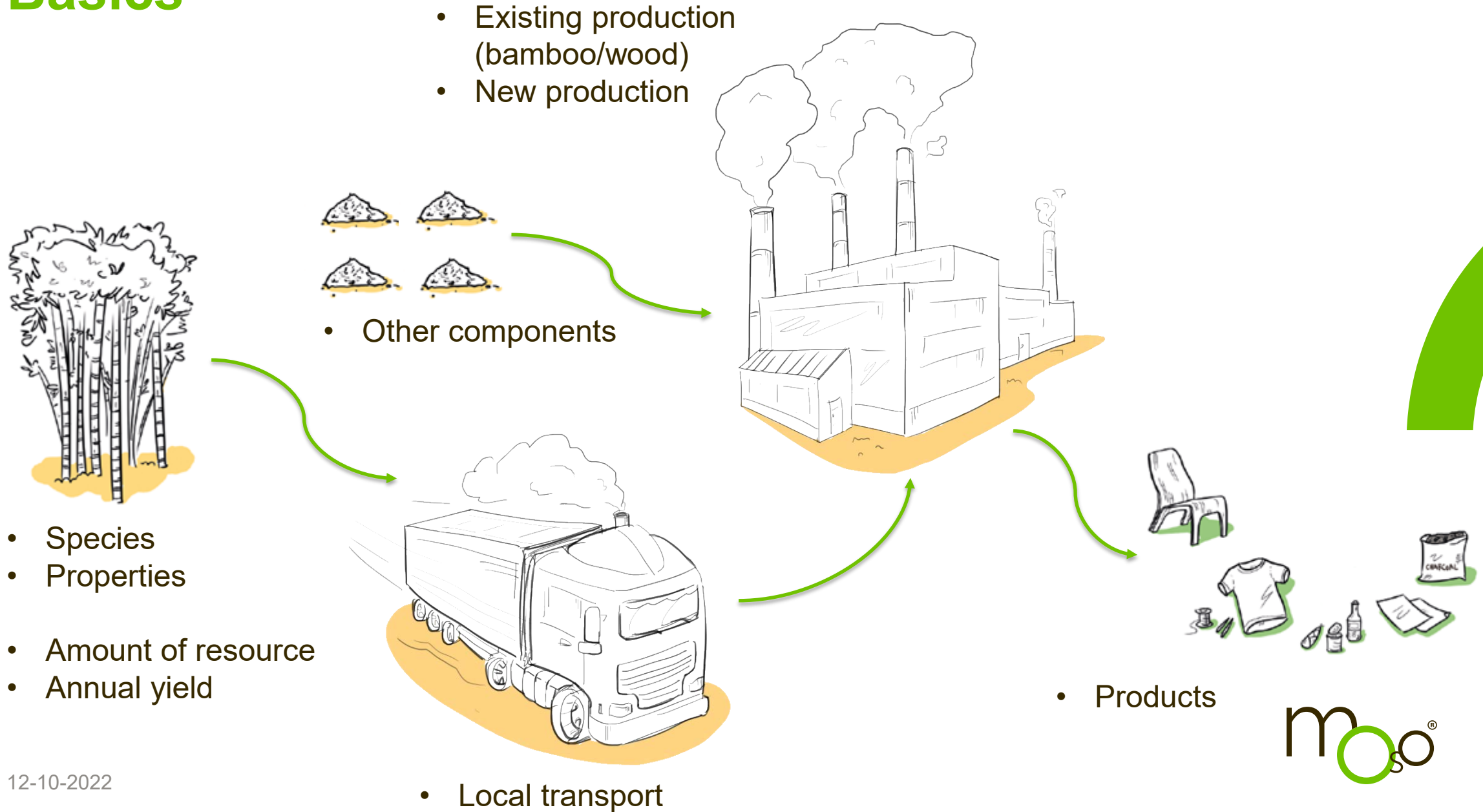


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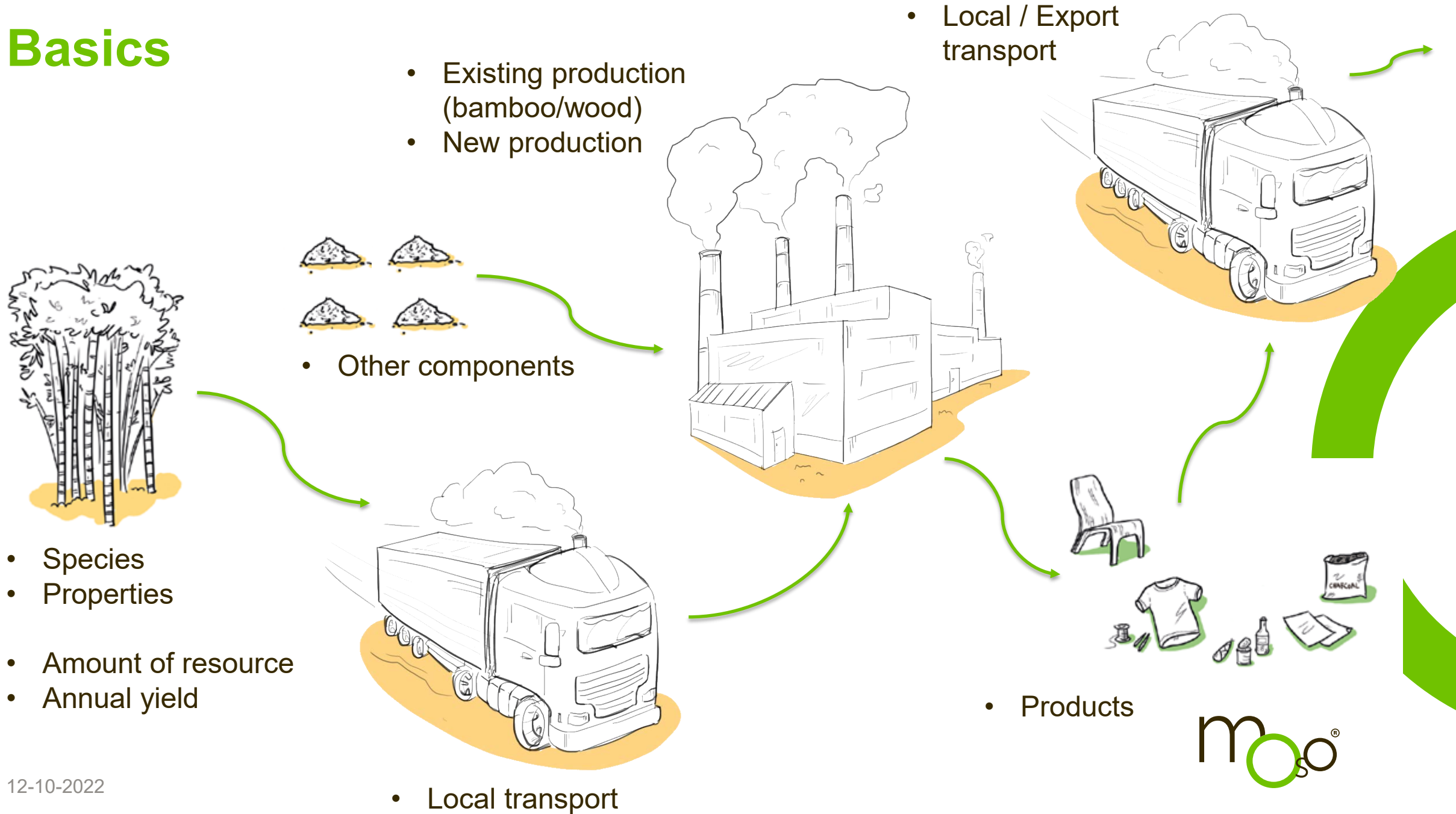


- Local transport

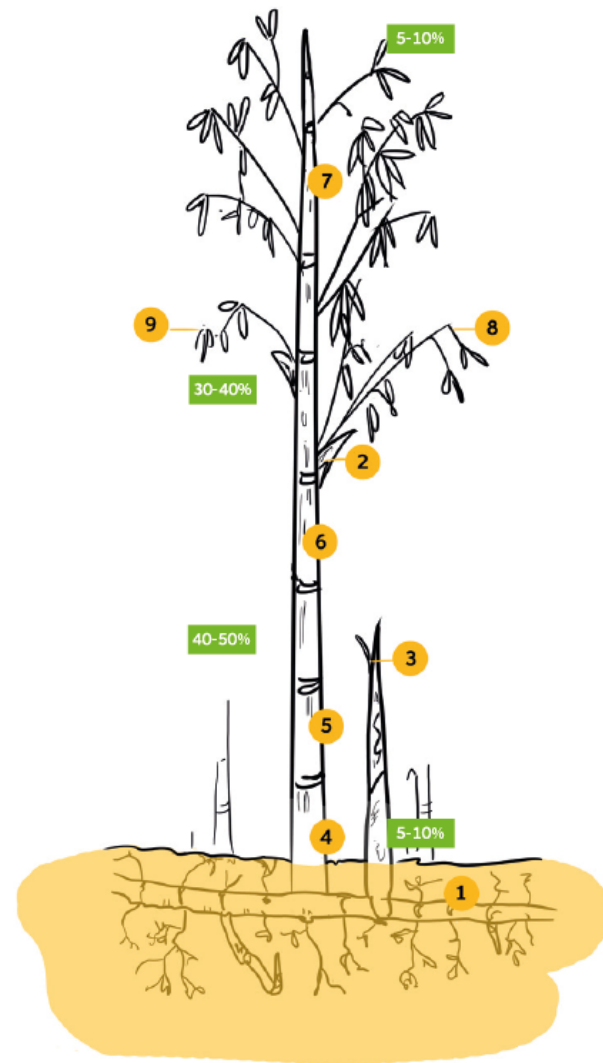
Basics



Basics



What to do with resource?

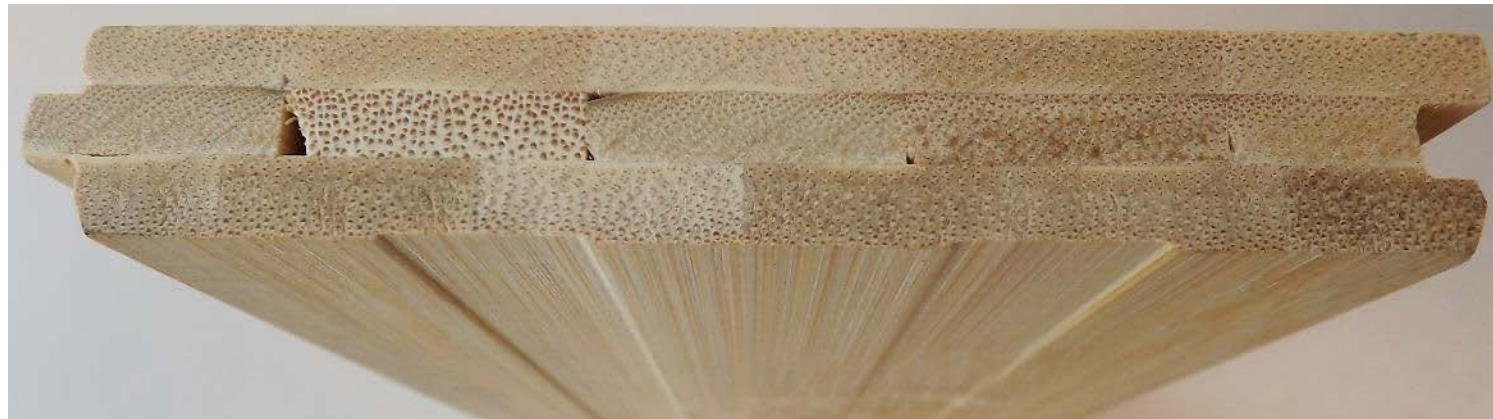


9 Leaves	Manure Fodder Pigments	Medicine Juice Beverages
8 Twigs	Brooms Textile	
7 Top part	Sticks (toothpicks , skewers) Bamboo poles Sca ffolding Agricultural tools	
6 Middle upper part	Curtains , mats , carpets Woven articles Handicrafts	
5 Middle lower part	Laminated panels & beams Flooring	
4 Base part	Charcoal Handicrafts	
3 Shoots	Food	
2 Sheaths	Handicrafts Fodder & feed Pulp	
1 Rhizome & roots	Handicrafts Brushes	
Processing waste	Particle board Charcoal Pulp Granules Fuels	

Experiences from China (started in 1997)

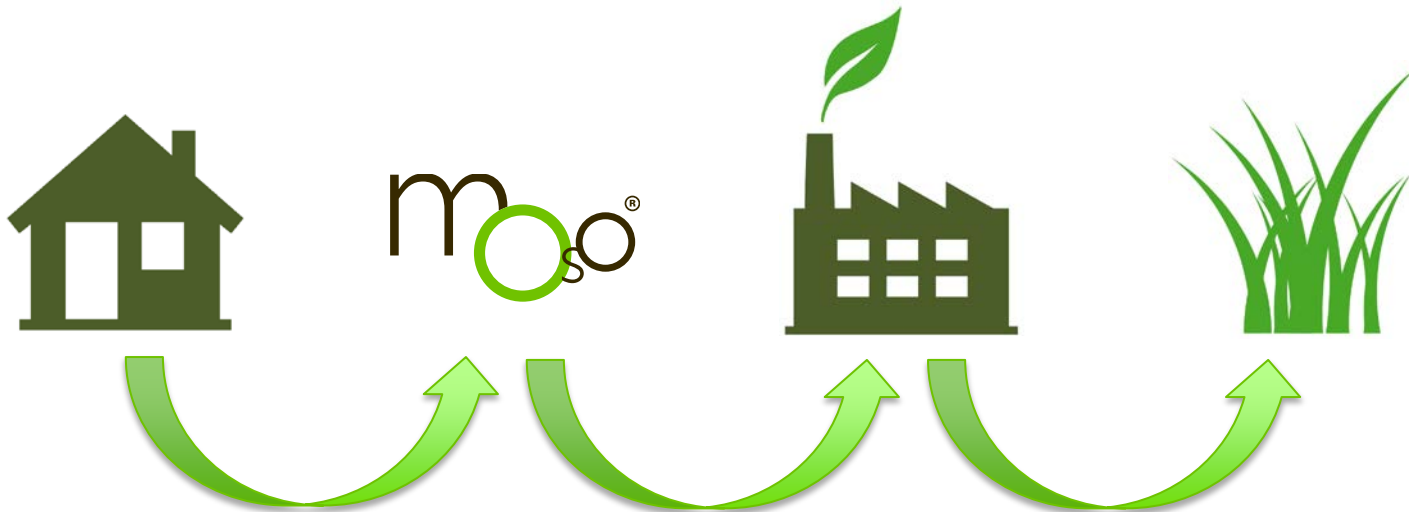
First engineered bamboo product

- Not fulfilling market requirements
 - Technical Quality and Regulations
 - Wishes, Needs, Trends of the market and customers
- Improvements to be made in production



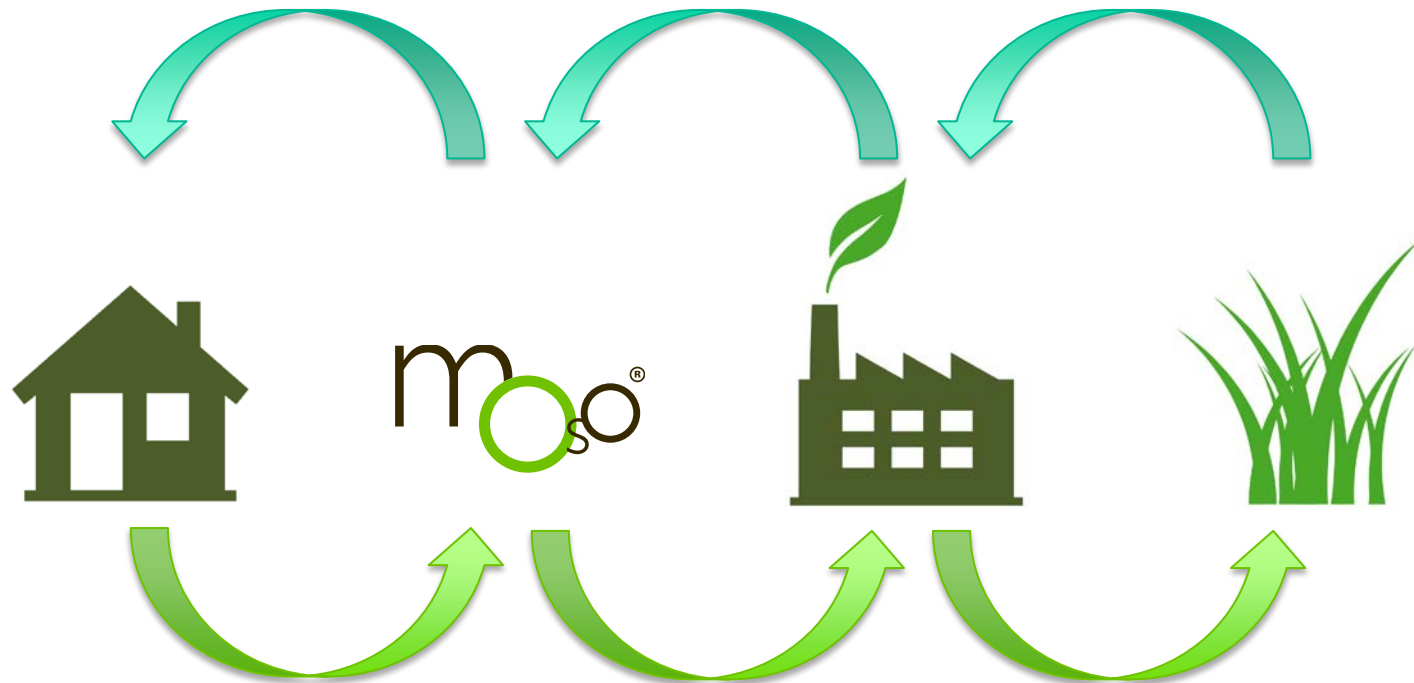
Knowledge transfer

- Transfer knowledge from the market to factory
 - Technical
 - Market, customers



Knowledge transfer

- Transfer knowledge from the factory to market



Knowledge transfer

- What is the standard?
 - Market potential and Products
 - Requirements
 - Certifications and Regulations
- Speaking the same language...

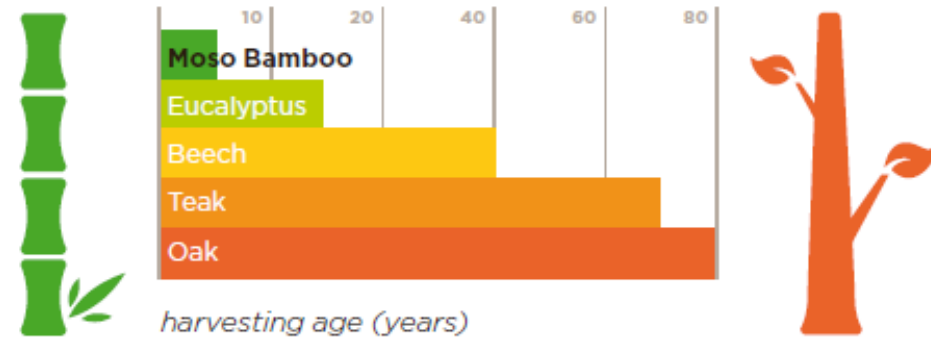
Growth properties of Giant Bamboo

- **Bamboo is a grass**
- **Very fast growing; holds World Guinness Book of Records for fastest growing plant (1.22 meters / day).**
- **Approx. 32 million hectares available worldwide (approx. 7 million hectares in China).**
- **Takes approx. 4-5 years to mature for use in building supplies construction products.**
- **Each plant consists of many stems with new shoots sprouting every year from the mother plant.**
- **No deforestation by default: only 20-25% of the mature stems need to be harvested each year.**
- **May be provided with FSC-certification—although not required to counter deforestation (unlike wood).**

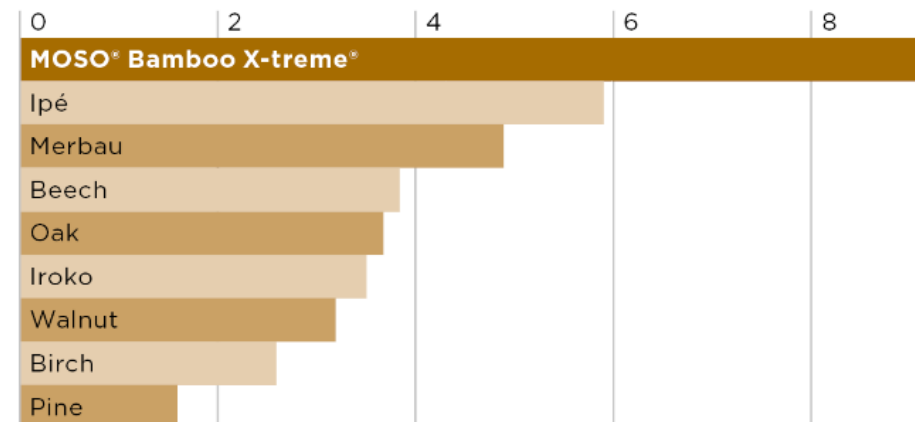


Why MOSO Bamboo Products?

- High hardness
- High dimensional stability
- Strong and durable
- Various environmental benefits



brinell hardness 9.5 kg/mm²
(EN 1534)



X-tremely well made

harvesting after
5 years



split the Moso
bamboo stems,
remove
the outer
skin and
crush
the strips



modify the bamboo strips
with a heat-treatment at
200°C



compressing the
strips into High
Density[®] material



finally creating
the final profile
and surface



MOSO[®] Bamboo X-treme[®]:
material more stable, harder
and stronger than almost any
other hardwood in the world!

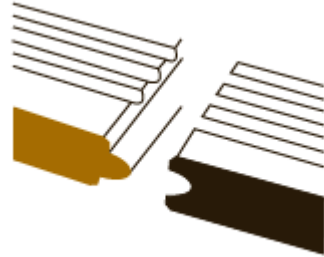
MOSO®
Bamboo X-treme®
the new generation
in sustainable
Decking & Cladding



Bamboo X-treme[®] benefits



hard & durable



high stability



easy to install



fire resistant



**beautiful
appearance**



endless resource



CO₂ neutral





economical



MOSO projects

**MOSO® bamboo
x-treme® cladding**

MOSO® Head Office
Zwaag, the Netherlands

 Landmark Vastgoed
Management
 Robbert Vogtländer

600m²



MOSO®
bamboo x-treme®

**Meier On Rothschild
Tower**
Tel Aviv, Israel

 Richard Meier & Partners
Architect LLP
 Lior Teitler



MOSO®
bamboo x-treme

**CLINEA Residential
medical center**
Saint Raphael, France


 Denis Dubeset




moso®

MOSO®
bamboo x-treme®

Catholic University
Lira Offices
Santiago de Chile, Chile

 Sabbagh Arquitectos

 1200 m²

moso®

MOSO® bamboo x-treme decking

Hilton Hotel
Bogota
Colombia

Felipe Gámez C. y Cia. Arq,
S.A.S
Andres Valbuena

560 m²

The logo for MOSO, featuring the lowercase letters 'm' and 's' in white, with a green circle containing the letter 'o' positioned between them. A registered trademark symbol (®) is located to the upper right of the 'o'.

**MOSO® bamboo
x-treme, ultradensity**

**Puku Ridge
Safari Lodge**
South Luangwa National
Park, Zambia

 Luxury Frontiers
 Scott Ramsay

 1900 m²



MOSO® world leader in bamboo



moso® bamboo flooring

moso® bamboo beams, panels & veneer

moso® bamboo outdoor

moso® unlimited solutions



Thank you