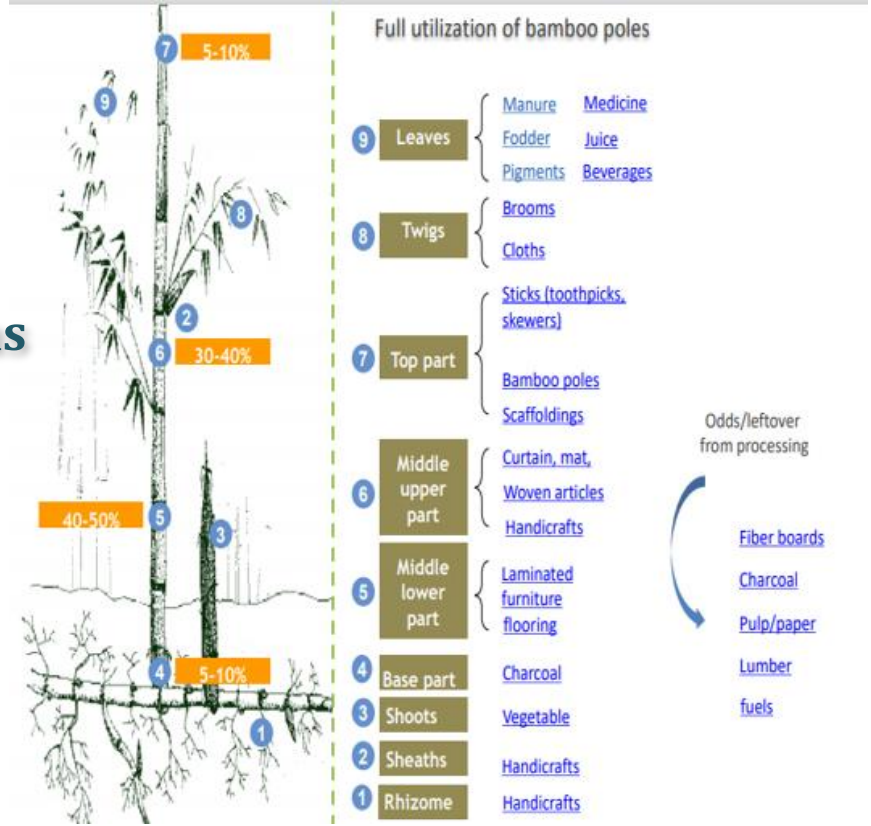
Development of Bamboo products as substitutes for plastic products

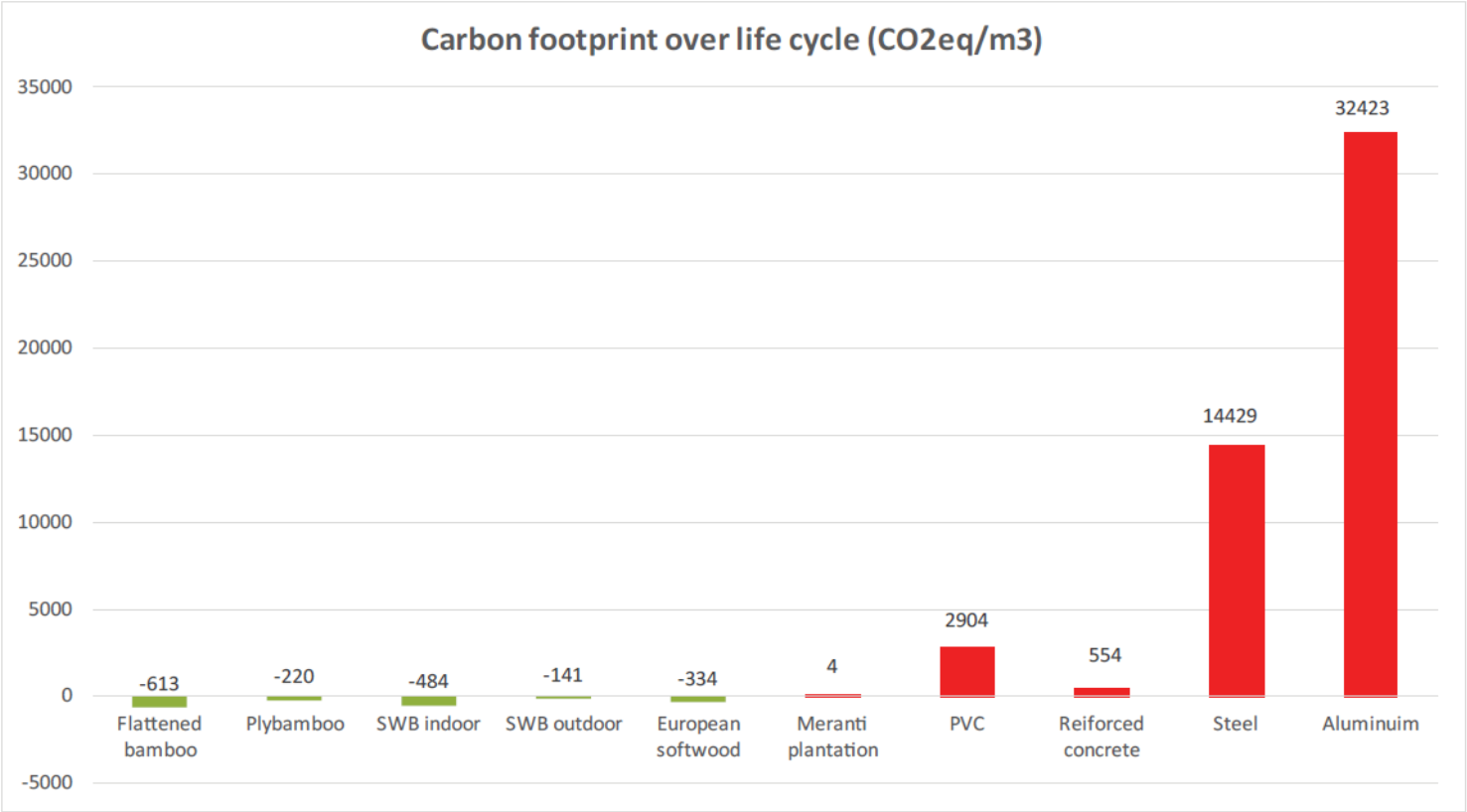
Bamboo

- Due to faster growth, shorter rotation, and higher carbon sequestration of bamboo plants compared with trees, bamboo is starting to play an increasingly important role as a natural renewable and biodegradable resource.
- 1642 species (INBAR, KEW ,2017), approximately 35 million hectares(FAO,2020), 1% of the total forest area, distribute in the tropical and subtropical countries (mostly in the developing countries)

Advantages

- Fast Growing
- Annually harvestable
- Food-Livelihood-Environment Nexus
- Diverse product ranges
- Hardy and Climate resilient
- Enormous intangible benefits





Lifecycle carbon footprint of durable bamboo products compared to other commonly used industrial materials. Bamboo compares favourably to European soft wood and performs better that tropical hard wood. (Source: INBAR Technical Report 35)

Bamboo

- There are over 10000 documented uses for bamboo, and more are being discovered by modern science and technology, including housing, crafts, pulp, paper, panels, boards, veneer, flooring, roofing, fabrics, oil, gas, charcoal and food.










Daily necessities

1.Bamboo shells



2.Bamboo stationery



3.Personal care products



4.Furniture



5.Disposable bamboo tableware



6.Durable bamboo dining utensils



7.Biodegradable bamboo bags



Industrial products

1.Bamboo wrapping composite material



2.Bamboo lattice irrigation filler



3.Automotive interior products



4.Bamboo packaging material



5.Bamboo baseboard material



Building materials

1.Bamboo-wrapped composite material pipe



2.Bamboo board



3.Bamboo decorative materials



4.Bamboo fiber composite materials



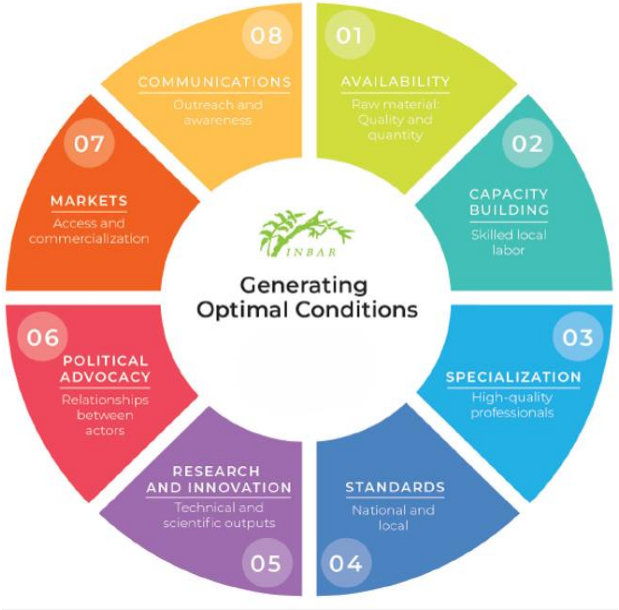
5.Bamboo grating



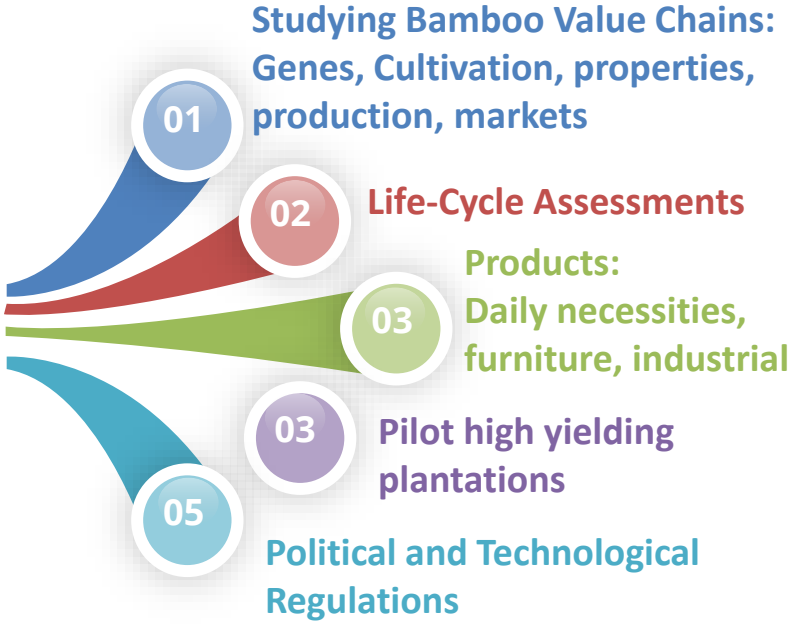
BASP Pilot Project

- Roll-out pilot projects in six member countries:
  - **Asia:** Malaysia and Vietnam
  - **Africa:** Cameroon and Ethiopia
  - **Latin America:** Ecuador and Brazil
- Intensify research to validate the suitability of bamboo / products– from carbon and competitiveness perspective.
- Scale up advocacy and publicity for creating enabling frameworks (policy, trade, standards): local, regional and global level
- Develop projects and programs for scaling up benefits to people and planet.

BASP Pilot Project

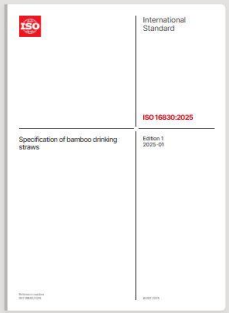


Bamboo as a Substitute for Plastics





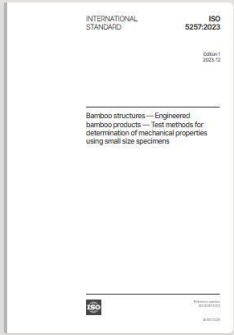
ISO Standards



ISO 16830:2025

Specification of bamboo drinking straws

Published (Edition 1, 2025)



ISO 5257:2023

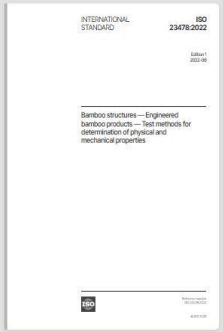
Bamboo structures — Engineered bamboo products — Test methods for determination of mechanical properties using small size specimens



ISO 5942:2024

Bamboo-wood composite for container flooring

Published (Edition 1, 2024)



ISO 23478:2022

Bamboo structures — Engineered bamboo products — Test methods for determination of physical and mechanical properties

Published (Edition 1, 2022)

















Offering an alternative to plastics at INC



- Intensive participation as observer through contribution in the contacts groups, definitions, principles, scope. Written submissions and statements in all five sessions of the INC.

Thank you!

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