FutureBridge

5 Emerging Non-wood Forestry Based Feedstocks
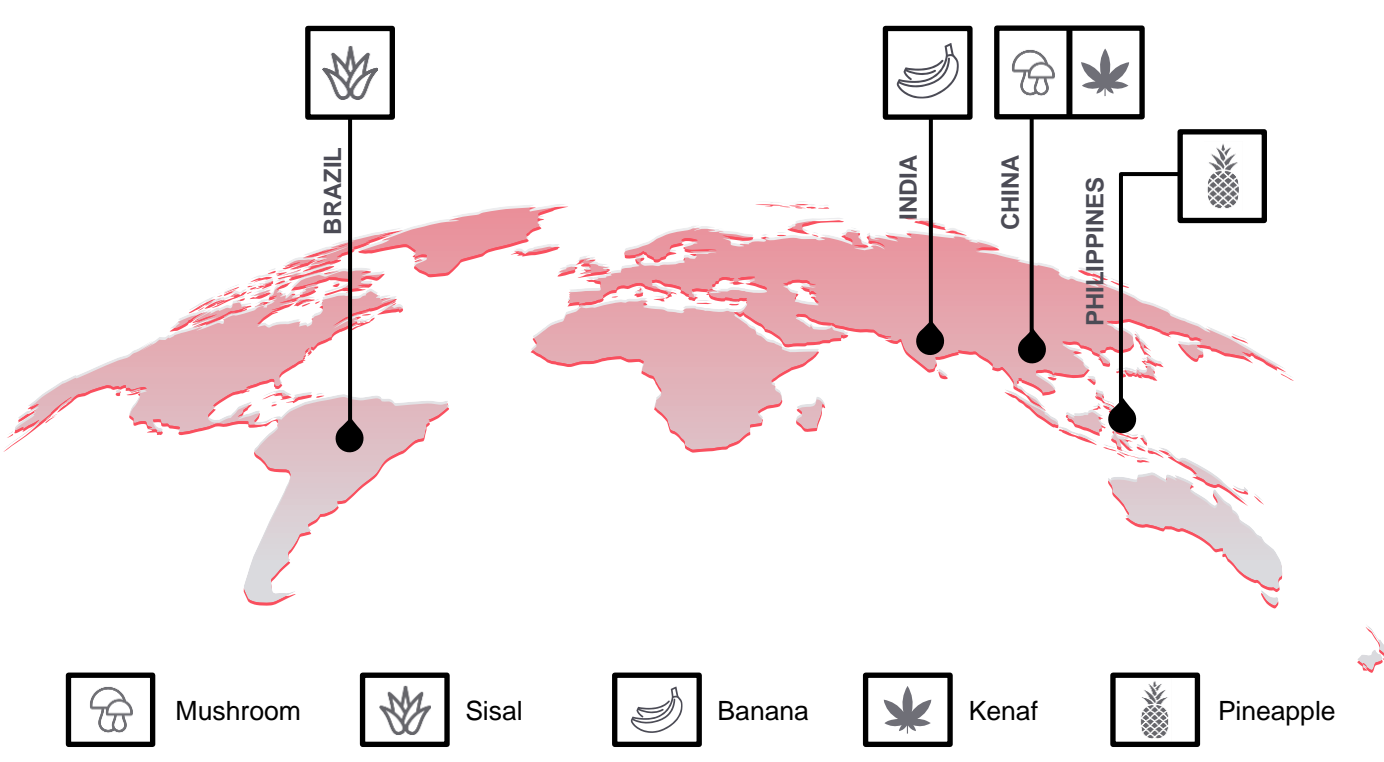
Deforestation and finite availability of wood, have opened new opportunities for non-wood forestry products

Emerging Non-wood Feedstocks and its Volume Availability
Based on application spread and maturity of the feedstock

~50mn tons	~0.25mn tons	~1.2bn tons	~45mn tons	~70mn tons
MUSHROOM	SISAL	BANANA	KENAF	PINEAPPLE

Top supply region

BRAZIL — Sisal
INDIA — Banana
CHINA — Mushroom, Kenaf
PHILIPPINES — Pineapple

Legend: Mushroom | Sisal | Banana | Kenaf | Pineapple

Application Span
Consumer products is the current major area of use for all the five feedstocks

	Textile	Consumer products	Construction	Medical	Food & Beverage	Packaging	Automotive	Paper industry	Others
MUSHROOM	✓	✓	✓	✓	✓	✓	✓		✓
SISAL	✓	✓	✓	✓		✓	✓	✓	✓
BANANA	✓	✓	✓			✓		✓	
KENAF	✓	✓	✓			✓	✓	✓	✓
PINEAPPLE	✓	✓				✓	✓	✓	✓

✓ Promising area for future   ✓ Major area at present   ✓ Potential area for future

Application use cases

Consumer goods and textile to continue growth; New use cases to open up in construction, paper & pulp, automotive, other segments.

Commercial Application
Potential Application

Sisal based Cordage
WIGGLESWORTH & CO. LIMITED | COTESI | MeTL GROUP

Currency Notes using banana fiber pulp
Victoria Byoma, Uganda

Pineapple fiber reinforced with plastic material
Mahidol University, Thailand

Banana fiber-based paper products
EcoPaper *(Suppliers)* | bluecat paper

Kenaf based fiberboard
Panasonic | KENAF VENTURES | *(Suppliers)*

Mushroom-based filler for dental cavities
CLEMSON UNIVERSITY *Clemson University, US*

Mushroom-based apparel
ecovate *(Supplier)* + TOMMY HILFIGER | ck Calvin Klein *(Customers)*

Pineapple fiber-based apparel
ananas anam *(Supplier)* + H&M *(Customer)*

Mushroom-based bricks for construction
MYCOMORS *(Supplier)*

Production of hygiene products (sanitary pads) using banana fiber
Saathi | SPARKEL | Sanfe | CARMESI *(Suppliers)*

About FutureBridge

FutureBridge tracks and advises on the future of industries from a 1-to-25 year perspective.

We keep you ahead on the technology curve, propel your growth, identify new opportunities, markets and business models, answer your unknowns, and facilitate best-fit solutions and partnerships using our platforms, programs, and access to global ecosystems and players.