INBAR
INTERNATIONAL BAMBOO AND RATTAN ORGANIZATION

Bamboo and plastic pollution

New global initiative seeks to leverage bamboo to fight the scourge of plastic pollution.

Bamboo as a Substitute for Plastic Initiative

The Bamboo as a Substitute for Plastic (BASP) Initiative is an important part of the Global Development Initiative. It aims to help mitigate plastic pollution and address climate change.

- **24 June 2022** — At the High-level Dialogue on Global Development chaired by Chinese President Xi Jinping, the BASP Initiative was included in a list of deliverables in the Chair's Statement.
- **20 September 2022** — At the Ministerial Meeting of the Group of Friends of the GDI, China announced it would implement the BASP Initiative, jointly formulate the Initiative's Global Action Plan with INBAR, and work with all parties to address global plastic pollution.
- **7 November 2022** — At the 25th Anniversary of INBAR and the Second Global Bamboo and Rattan Congress, President Xi Jinping delivered a congratulatory letter. China and INBAR jointly launched the BASP Initiative.
- **7 November 2023** — At the First International Symposium on Bamboo as a Substitute for Plastic, China and INBAR released the Global Action Plan for Bamboo as a Substitute for Plastic (2023–2030).

Choking on Plastics

The 21st century is no stranger to plastics. Our modern lifestyles are highly reliant on plastics in the forms of packaging, construction, textiles and other consumer products which make our world run smoothly. However, with over 400 million tonnes of plastic waste generated annually, there have also been severe drawbacks to the world's embrace of the material.

Over the last fifty years, billions of tonnes of plastics have ended up in landfills or been discarded in natural environments, wreaking havoc on terrestrial and marine ecosystems. Plastic waste leaches harmful chemicals into soils, contaminating farmland and compromising food security. In oceans, plastics account for 85% of all maritime waste, leading to declines in marine biodiversity and damaging aquatic ecosystems.

Plastics also contribute to climate change. Mainly produced by fossil fuels, greenhouse gases are emitted throughout the life cycle of plastics. As plastic use and resulting waste increase globally, these emissions are expected to double by 2060 if the world does not introduce new policies.

Targeted global action is needed, given the transboundary and complex nature of the plastic problem across food chains, carbon emissions and biodiversity protection.

Benefits of Bamboo

Bamboo has numerous advantages that make it an ideal alternative material to plastics. It is abundant in the Global South, growing widely across over 50 million hectares. With over 1600 known species, bamboo features a wide range of properties that allow for diverse value addition.

Bamboo is annually harvestable, maturing in just three to four years. Its extensive root and rhizome systems bind soil and allow for annual regrowth after harvesting with no need to re-plant. It is also completely biodegradable, capable of breaking down within two to six months with proper composting. Conversely, some plastics take hundreds of years to break down, degrading into microplastics with potentially adverse impacts.

Bamboo forests also act like a giant carbon sink, efficiently sequestering more carbon than even some tree species like the Chinese fir. On top of that, high-quality bamboo items lock in carbon for the product's entire lifespan, while plastics continue to largely rely on fossil fuels and energy-intensive processes.

Over 10,000 types of bamboo products have already been developed. Bamboo products can replace single-use plastics, which are among the most difficult items to recycle, including straws, cutlery, chopsticks, cups, bowls and food packaging. Many other durable products can be made with bamboo such as keyboards, watches, flooring, furniture, construction material, wind turbine blades and piping.

The world is now waking up to the promise of bamboo as a critical tool for ushering in a biobased low-carbon economy and defeating the scourge of plastic pollution.

IN ACTION...

The BASP Initiative is guided by the framework of its Global Action Plan. It sets forth a series of actions that marshal global resources and key actors to tackle plastic waste and climate change.

Since July 2023, INBAR has mobilized research institutes around the world to conduct scoping studies in pilot Member States, including Malaysia, Viet Nam, Cameroon, Ethiopia, Brazil and Ecuador. The main objective of these scoping studies is to determine the feasibility of scaling up bamboo industries in different national contexts in order to combat plastic pollution. Work on eight related topics has been carried out, from research on genetics, species type, resource distribution, improving yields, and manufacturing technology to surveying market conditions and devising a strategy for EU plastic substitution.

Ultimately, the project seeks to foster new paradigms and modes related to the entire chain of bamboo products with potential for plastic substitution.

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The International Bamboo and Rattan Organization (INBAR) promotes the use of bamboo and rattan for sustainable development.

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