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**The Innovative Development of the “Bamboo as a Substitute for Plastic” Industry and the
Global Plastic Actions**

By

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The views expressed are those of the author and do not necessarily reflect the views of
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1. About Bamboo

1.1 Status



Data Source: Statistics and Collation from the UN ComTrade database.

- ◆ **Resources:** There are **more than 1600 species** of bamboo in the world, widely distributed in the tropical, subtropical and temperate regions of Asia, Africa and Latin America.
- ◆ **Industry:** Nowadays, bamboo industries have realized almost full-biomass utilization and the related value-chain. Bamboo is widely applied in **textile, green food, renewable energy, construction, medicine & health, furnishing and housewares, handicrafts, etc.** Bamboo is recognized as an excellent alternative substitute for wood and plastic.
- ◆ **Trade:** In 2021, the global export value of bamboo products is around **3.599 billion USD** (around 3.381 billion EUR).



1. About Bamboo

1.2 Features and Advantages



As a green, low-carbon, fast-growing, renewable and degradable biomass material, bamboo can provide nature-based solution for UN 2030 Sustainable Development Goals:

- ◆ SDG1 No Poverty
- ◆ SDG7 Affordable and Clean Energy
- ◆ SDG11 Sustainable Cities and Construction
- ◆ SDG12 Responsible Consumption and Production
- ◆ SDG13 Climate Action
- ◆ SDG15 Life on Land



2. The “Bamboo as a Substitute for Plastic” Initiative

- ◆ Formulate supportive policies
- ◆ Promote technological innovation
- ◆ Encourage scientific research
- ◆ Promote market expansion
- ◆ Enhance publicity



2. The “Bamboo as a Substitute for Plastic” Initiative

2.1 Progress

- ◆ Participating INC-1 and INC-2;
- ◆ Formulating a Global Action Plan for Bamboo as a Substitute for Plastic □
- ◆ Encouraging scientific research and innovation;
- ◆ Promoting the significant potential and value of bamboo in key international fora.



Academic Seminar on INBAR project



Participating WTO Dialogue



Participating INC-1



Exhibition on World Environment Day



2. The “Bamboo as a Substitute for Plastic” Initiative

2.2 Impacts on Bamboo Industries

- ◆ **Promote** global policies harmonization for coordinated and universal actions against plastic pollution, **facilitate** the regularization and standardization of plastic substitute products;
- ◆ **Assist** the transformation and upgrading of the bamboo sectors in developing countries, **help** achieving the dual carbon goals and green development;
- ◆ **Coordinate** advantageous scientific innovation forces in the world, **develop** new products and technologies;
- ◆ **Enhance** the formation of new bamboo production, processing and applications models, **promote** new market, consumption and green trade;
- ◆ **Focus** on bamboo plastic substitute products, **carry out** entire lifecycle environment evaluation, which help **push forward** controlling of plastic pollution and combating climate change.



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3. Products, Challenges and Opportunities

3.2 Challenges

- ◆ Limited scale, production capacity and product types, lack of advanced technologies;
- ◆ Fragmented policies among countries and regions which restrict the promotion and application of plastic substitutes
- ◆ Inconsistent and complex rules, norms and standards for sustainable products in international trade
- ◆ Insufficient consumer awareness



3. Products, Challenges and Opportunities

3.3 Opportunities



- ◆ Finding alternative plastic substitutes is of great practical significance for the global response to the plastic pollution crisis;
- ◆ According to UNCTAD statistics on trade value of plastic substitutes, natural fibers (plant/tree based) make a significant part of the main substitutes.



3. Products, Challenges and Opportunities

3.4 A Case of Best Practices

Anji, China

- ◆ Location: northwest of Zhejiang Province
- ◆ Total area: 1800 square kilometers
- ◆ Bamboo forest area: 670 square kilometers
- ◆ Total production value of the bamboo sector: nearly 20 billion RMB (about 2.5 billion EUR)
- ◆ With 1.8% of the national bamboo forest resources, Anji generated 10% of the national total production value.





3. Products, Challenges and Opportunities

3.4 A Case of Best Practices

- ◆ Focus on top-level design, systematic policy supports
- ◆ Develop entire industry chain
- ◆ Accelerate development of key scenario applications
- ◆ Comprehensively promote public participation





THANK YOU

