

Coming Up with the Sustainable Resources

Is it Possible for Us to Shift From Contemporary Plastic to Bamboos?

Issues We Face Today

110K tons
From 1987 to 2018, within 30 years, water usage has increased from 150 thousand tons to 260 thousand tons.

1.72 million
Plastic wastes are floating on the East Asia Pacific known as **garbage patch**, harmful to natural habitat.

Nachhaltigkeit

- It is an origin of both idea and word Sustainability.
- It was introduced as forest economic theory by Carlowitz more than 300 years ago.
- It is an idea that humans should not cut trees more than the amount that of forests can recover by itself, to constantly provide woods, and decrease burdening.

Our Studies and Works

Maniwa, Okayama, Japan Biomass Energy

- Maniwa uses materials produced in local forests to provide energy they need.
- They are dependent on **government funds** and are not **Economically independent**.
- Deforestation**
Biomass should be **revised**. If biomass became a huge thing, there would not be enough **woods**.

Schwarzwald, Freiburg, Germany



- From Schwarzwald, Germany is **self-sufficient in providing woods**.
- They have a society structure that **ecofriendly**, as well as thing that **citizens themselves benefits the most**.



Facts

166,726 ha
Area size of the bamboo forests across Japan.
It is 3269 times bigger than Tokyo Disney Land.

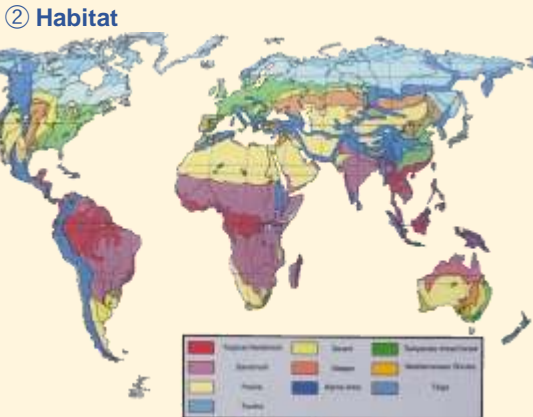
It only takes **3 months** for bamboos to grow.

What's Good About Bamboos?

- 1. Growth Rate:** As bamboos grow more than ten times faster than woods, it could be used immediately.
- 2. Energy Efficient:** Bamboo pellets are more flammable than pellets made with wood.
- 3. Strength and Flexibility:** Bamboos are strong. In fact, they were used as concrete during Edo era. Flexibility could be used as shock absorber in a way.

Difficulties

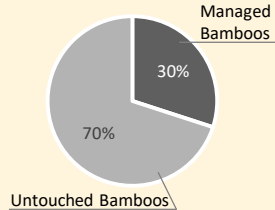
- 1. Processing**
It takes **2 times more** time than processing wood.
Loading fees costs **4 times** more than fee for woods.



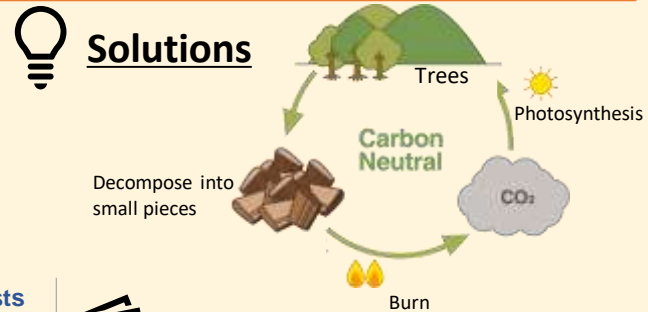
- Grows on warm and wet environment.
- Bamboos would not grow in **North America, Europe, North Africa**.

Untouched Forests

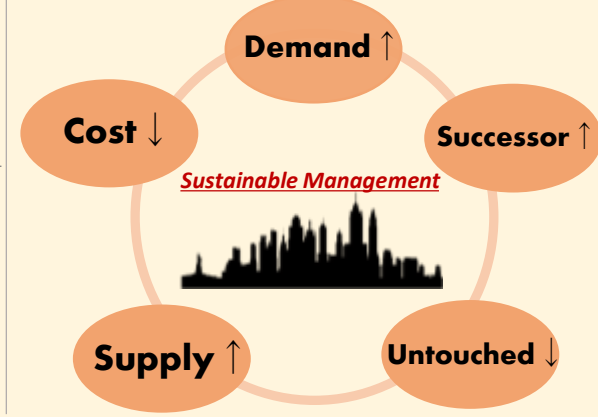
- **Only 30%** of the forests are taken care by human
- Without a hand of human, the quality would be much lower.
- With its **rate of growth** and **vitality**, bamboos might **devastate other species**.



Solutions



Benefits



What We Should Do For the Future

Imagine a world without a plastic. most of us believe that it would not be the same as the way we live today. Would not there be a prejudice, and bias towards not having plastics? Take a step back, and ask ourselves a fundamental question.

"Does it have to be made out of plastic?"

