



Why bamboo is a surprising climate solution

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It's available, scalable and nature-based. It's been touted by the BBC as one of the 39 key ways to 'save the planet', and by non-profit Project Drawdown as a critical climate solution.

Why is bamboo gathering more attention as a climate change solution, and how can countries do more with this humble grass plant?

#1. Bamboo is a surprisingly effective carbon sink

There are 35 million hectares of bamboo – probably more, in fact – around the world. Countries like China are already incorporating bamboo into their carbon markets, and INBAR Member States have committed to restore more than 5 million hectares of land with bamboo.

This is because bamboo grows fast – one species has grown up to 91 cm a day at its fastest – and regrows after harvesting, without the need to replant. It takes only a few years for bamboo to reach maturity, unlike wood. This means that, over time, bamboo can be harvested several times, and store a surprising amount of carbon in a large number of durable products, from cups to construction materials.

INBAR research has shown that after 30 years, bamboo can store or reduce 401 tons of carbon per hectare (tC/ha): that's more carbon than certain species of tree. (Chinese fire trees will store and reduce only 236.7 tC/ha in the same period.)

One easy way to enhance the carbon storage potential of existing bamboo forests is to improve how they are managed. In 2021 INBAR published a policy brief on how policymakers can get money for storing carbon in their bamboo forestry projects, and a manual helping foresters to work out the carbon storage potential of their bamboo plantations.

#2. Companies are increasingly using bamboo to replace everything from single-use plastics to PVC and steel

Cups, car interiors, straws, skateboards, flooring, furniture, even wind turbine blades and drainage pipes... In recent decades, bamboo processing technologies have improved dramatically, making it possible to use bamboo in place of timber, steel and plastics. A number of companies have organically switched to using bamboo instead of other materials, because of import restrictions or costs.

This is good news for the climate, because durable bamboo products almost always have a lower carbon footprint and eco-cost than other materials.

Every year, more companies and organisations decide to experiment with bamboo. Both the Financial Times and The Economist have covered exciting new fibres which are revolutionizing the way we think about bamboo: from storm drainage pipes to train carriage fuselage.

#3. A biobased source of energy

Around the world, hundreds of millions of people still rely on wood, often illegally harvested, as a source of cooking fuel. Bamboo briquettes offer a more sustainable, often cheaper, alternative, and can provide a source of income for households. INBAR works with a number of businesses in African countries which are selling bamboo briquettes.

Bamboo can also be converted into pellets for electricity generation. Because bamboo thrives on sloping and degraded soils, it need not compete with agriculturally productive land. A number of bamboo factories power their processes using only the bamboo which is left over from product making.

If bamboo is so good, why isn't it everywhere?

Because it's a grass, not a tree, bamboo is often overlooked in discussions about 'nature-based solutions'. International standards, management techniques and carbon assessments for timber forests and products do not apply to bamboo; in addition, international timber trade laws can have

an unintended knock-on effect on importing bamboo products. This is why organisations like INBAR are promoting more research into understanding bamboo's climate change potential: from our work on bamboo construction to our projects on bamboo charcoal making in our Member States.

Source: <https://www.inbar.int/why-bamboo-is-a-surprising-climate-solution/>