

NEW INTERNATIONAL STANDARDS FOR BAMBOO CHARCOAL FOR SUSTAINABLE ENERGY AND DEVELOPMENT

In December 2020 the [INBAR website](#) published a news announcing that [Bamboo Charcoal](#) now has its own International Standard.

Since many years the [International Network for Bamboo & Rattan INBAR](#) has been working with the [International Organization for Standardization \(ISO\)](#) to develop and publicize standards for bamboo and rattan products. In particular, INBAR is a liaison organization of the ISO Technical Committee promoting the standardization of bamboo, rattan, and derived materials. In this framework, it has also been providing technical support to the Working Group on bamboo charcoal, which included bamboo charcoal enterprises, organizations, experts and universities.

In December 2020, the [International Organization for Standardization \(ISO\)](#) officially released a series of [three international standards for bamboo charcoal, namely: generalities, fuel applications and purification applications](#). These series specify the terms and definitions, classification, physical and chemical index requirements, testing methods, as well as marking, packaging, transportation and storage of bamboo charcoal products.

These new official standards regulating the definitions and quality of bamboo charcoal and products should promote wider international use of bamboo resources, bringing significant environmental benefits. In particular, these standards can help ensure that many interested countries can set the bamboo biomass at the center of renewable energy policies, promoting greater investments in bamboo-based charcoal production as a *green biofuel* that can fight deforestation and mitigate climate change.

The INBAR News highlights that millions of households around the world rely on biomass, often timber, as fuel for cooking and heating. Bamboo charcoal is a sustainable and reliable alternative source of energy that helps countries reduce the use of wood, protecting fragile forests while still meeting the energy needs of their growing populations. Bamboo charcoal and briquettes can be created easily, without the need for large investment, and boast a similar calorific value and fuel efficiency to commonly used forms of bioenergy, yet having a smaller environmental impact than other common forms of biomass feedstock.

The [ISO Technical Committee website](#) presents the abstracts for the three international standards for bamboo charcoals: [generalities](#), [fuel applications](#) and [purification applications](#). The website also highlights that standards are developed and used by the people who need them and invites all interested actors to establish contacts with the country's [national members](#).

The promotion of the use of bamboo charcoal as a clean, sustainable and reliable source of energy is one of the INBAR's fields of action. In collaboration with the governments of interested countries, INBAR has



supported national initiatives to encourage the transition from the traditional fuelwood from trees which characterizes the energy practices of many rural communities, towards the use of bamboo as an alternative resource for firewood. These initiatives, [presented in the INBAR website](#), were carried out with the support of various donors and with the collaboration of numerous UN Agencies and international and national organizations expert in energy and environmental issues.

The International Standards for bamboo charcoal progressively elaborated and approved by ISO, regulating the definitions and quality of bamboo charcoal and products can further contribute to creating national systems for the use of *green bamboo-based biofuel*, including government policies and local practice having a significant positive impact in each country. These systems could be an integral part of national climate change strategies and a key contributor to the UN's Sustainable Development Goals.

The use of bamboo charcoal as source of energy, in fact, brings the following important benefits:

- *Improving the environment*, [reducing the release of sequestered carbon into the atmosphere](#). Because of their fast growth rates, bamboos are already considered effective CO₂ absorbers. Carbon can be further sequestered in durable harvested bamboo products and even higher carbon emissions reduction is possible if bamboo products replace non-renewable, carbon-intensive alternatives. With a calorific value similar to that of wood and almost half that of petroleum, bamboo charcoal also produces fewer pollutants.
- *Saving forests*. A large-scale switch to bamboo will have a significant positive impact on preserving the world's forest ecosystems. Millions of people worldwide who use biomass for their primary energy resource live near bamboo forests. Producing charcoal from bamboo forests or plantations takes pressure off fragile forest resources used for fuel, heating and firewood.
- *Investing in natural based solutions*. In countries where Bamboo is already widespread and in those where there is potential for its growth, if sustainably managed [bamboo plantations can bring great benefits for climate change and for biodiversity conservation](#). Some of the world's endangered species [rely on these plants](#) for food and shelter. Bamboo forest [provide important ecosystem services](#), such as landscape restoration, landslide control, groundwater recharge and water purification. Bamboo is an excellent replacement in plantation forestry and many countries across the world are [using bamboo to restore degraded land](#).
- *Strengthening local economies*. Rural communities living near bamboo forests and plantations not only can take advantage of bamboo by producing and using charcoal for energy needs of their homes and their economic activities. But they can also set up companies or cooperatives, or participate advantageously in larger production chains, to increase the manufacturing and the market of this product. INBAR highlights that charcoal production is a relatively simple process that involves little capital investment and the International standards approved by ISO can also help to grow worldwide trade in bamboo charcoal products, bringing significant economic benefits, new income streams and jobs for rural communities.

INBAR is an intergovernmental organization established in 1997 in Beijing, China. [It includes 47 Member States](#) most of which are producers of bamboo and rattan. In addition to its Secretariat headquarters in China, INBAR has Regional Offices in Cameroon, Ecuador, Ethiopia, Ghana and India. [Guided by its 2015-2030 Strategy](#), INBAR's priority is to work with countries to focus the use of bamboo and rattan as strategic resources that support sustainable development and their green economy action plans.



Did you know?

Nature-based solutions like planting bamboo and rattan could provide 37% of the mitigation needed to keep global temperature rise to under 2°C

Source: 10-1073/pnas.17-0465114



To know more

[News in INBAR website](#)

[ISO guidelines for bamboo charcoal](#)

[Charcoal Production in Dome Charcoal Kiln - publication in INBAR website](#)

[Bamboo charcoal briquetting - publication in INBAR website](#)

[Carbon sequestration and carbon emissions reduction through Bamboo Forests and Products 2018 Report](#)

[Use of bamboo for energy production in globalbioenergy.org](#)

[Publication in INBAR website](#)

[Article *The potential of Bamboo charcoal* in INBAR website](#)

[International Organization for Standardization \(ISO\)](#)

[Article in taylorsscottinternational.com](#)

[Article in foreststreesagroforestry.org](#)

[Article in hightechafrica.blogspot.com](#)

[Article in wedocs.unep.org](#)

[Publication in ifad.org website](#)

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