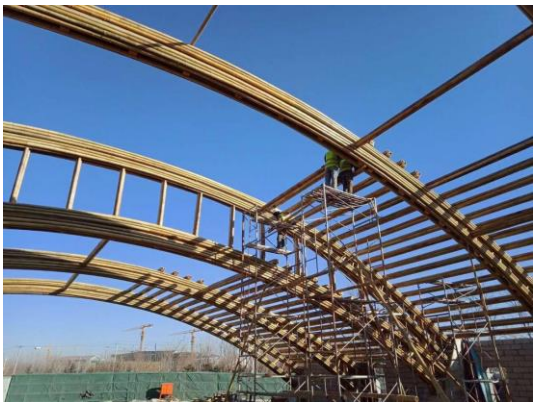
BAMBOO EYE PAVILION IN CHINA

SHOWCASING THE ARCHITECTURAL POSSIBILITIES OF BAMBOO IN MODERN LOW-CARBON CONSTRUCTIONS

In April 2020 the International Bamboo and Rattan Organization (INBAR)'s website published a news about the *Bamboo Eye Pavilion* managed by INBAR as part of the 2019 International Horticultural Exposition of Yanqing (Beijing) in China. The *Bamboo Eye Pavilion* was created to house programmatic activities while showcasing the architectural possibilities of bamboo in modern, low-carbon construction.

The *Bamboo Eye Pavilion*, which is 1600 square metres, was constructed entirely from 5000 *Moso* bamboo poles, taken from Chinese bamboo forests. Each bamboo arch spans between 32 to 40 metres. The space was designed to be self-ventilating, and the structure bears the weight of a rooftop garden. The bamboo garden surrounding the Pavilion covers 2000 square metres and also contains many decorative species of bamboo. This construction, made entirely using round-pole bamboo, is the largest of this kind ever built in north China.



The INBAR recent news informs that this groundbreaking construction has been featured in two documentaries on the potential of bamboo for construction:

- The first documentary entitled *Bamboo the tradition of the future* by film-maker Johan Granberg, is a 30-minute short film released to the public on Youtube in March 2020. This documentary describes the Pavilion as an exploration of contemporary architecture using bamboo, highlighting bamboo's beauty, versatility and use, and showing how its fast-growing attribute makes it a unique carbon sink to fight climate change. The documentary has received several awards in United States (Los Angeles), Chile an India.
- The second documentary entitled *Constructing a Bamboo Future* was released on 31 December 2019 by CGTN, the China Global Television Network. The documentary explores the history and culture of bamboo in China and around the world.

These documentaries will allow INBAR to continue worldwide disseminating the features of the *Bamboo Eye Pavilion*, which demonstrates how bamboo can also be used in place of more conventional materials to construct large buildings with great advantages for the environment. The Pavilion was designed by architect Mauricio Cardenas Laverde, one of the 28 experts in

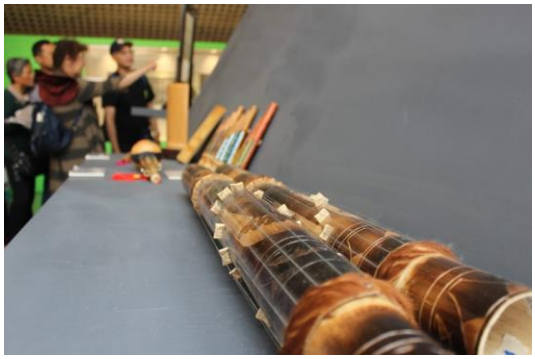
bamboo construction that make up the INBAR Construction Task Force.

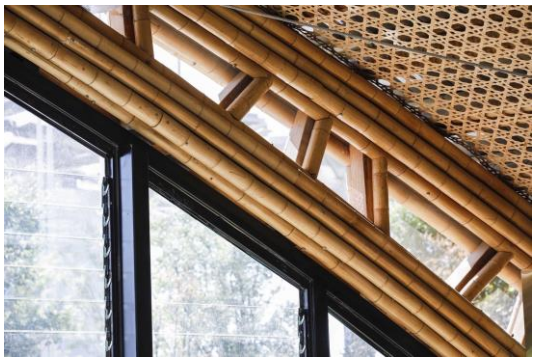
The *Bamboo Eye Pavilion* has been created by INBAR in the framework of its activities to promote Bamboo as a new construction material suitable to meet modern needs and challenges for new sustainability. The large size and beauty of the building showed the large number of visitors of the International Horticultural Exposition, which took place between April and October 2019, the exceptional potential of this natural building material that can represent the future of housing, replacing steel and wood thus reducing pressures on forest resources and strengthening local economies.

With a tensile strength greater than that of mild steel, and the ability to withstand compression twice than concrete, bamboo has been used in construction projects for thousands of years in China and others countries members of the INBAR Organization. Modern construction industry, however, continues mainly depending on steel and concrete and INBAR strategies consist in supporting member countries to foresee the cultivation and use of bamboo as part of country's sustainable development plans.

Bamboo requires few inputs to grow and can be intercropped. The rapid maturity of bamboo is an important factor in its value chain: because the plant regrows so quickly, it can be harvested and replaced relatively often. Bamboo forests that are well-managed can help to mitigate climate change because bamboo plants can absorb and sequester carbon dioxide at a higher rate than other species of trees: almost 13 tons of carbon per hectare per year, according to INBAR research. Bamboo can also help to restore degraded lands and protect forests, thus combatting desertification. It does this through its extensive root systems, which can live a century or longer, ensuring the plants' survival and can strengthen and support soil and prevent soil erosion.

Founded in 1997, the International Bamboo and Rattan Organization (INBAR) promotes environmentally sustainable development using bamboo and rattan. It comprises 46 Member States. In addition to its Secretariat headquarters in China, INBAR has Regional Offices in Cameroon, Ecuador, Ethiopia, Ghana and India. With more than 40 of its Member States from the Global South, INBAR has played a special role in promoting South-South cooperation for the last 20 years.





To know more

News in INBAR website - April 2020

Article in INBAR 2019

Article in INBAR 2019

Article in cgiar.org

Mauricio Cardenas Laverde Studio

Article in Globallandscapeforum.org

Bamboo the tradition of the future in Youtube.com

Constructing a Bamboo Future - CGTN

Article in theneijinger.com

Video in Youtube.com

Gallery in archdaily.com

Article in foreststreesagroforestry.org

Article in inhabitat.com

INBAR Publications