

## VALUING THE QUINCHA TECHNOLOGY IN THE BIO-CONSTRUCTION LATEST TRENDS

The Quincha is a construction technique that is being re-evaluated today as part of the latest trends in bio-construction. The bio-constructions magazine Mimbrea, for example, defines the Quincha technique as a [future tradition](#).

The Quincha is a woven cane or bamboo covered with mud. The material is earthquake proof thanks to the woven canes whose elasticity absorbs vibrations preventing the spreading of shocks throughout the structure. Furthermore, it is light in weight, easily mounted, and decreases loads on the buildings.

Quincha construction technique was created in ancient Peru (qincha in Quechua means wall) and was soon widespread as an anti seismic technique. The Quincha was also used to construct dwellings' second floors due to its low weight and elasticity.

This construction technique, however, has various other advantages that make it very interesting for the future. The Quincha ensures good thermal insulation provided by the layer of clay coating on the cane walls. This technique relies on the different locally available materials and is in line with the best environmental trends using local resources and knowledge.

The materials used include wood, canes, and mud mixed with vegetable fibre (straw). This technique can be used in areas with different characteristics, adapting buildings and materials to each location. The construction process is simple and can be done by small local companies and the buildings can be conceived in modules, depending on the needs and resources of families.

The traditional Quincha technology has been made object in time of studies, research and experimentation, to leverage and improve its structural characteristics. This ongoing process is supported by constant inputs from universities, research centers, and cooperation initiatives. Recently, this technology has also attracted the attention of architectural firms interested in working in the construction of eco-sustainable housing.



The prefabricated Quincha is one of the results of these studies. This technology, using the ancestral knowledge in the use of reed and mud, is mainly based on the standardization of the construction system, which facilitates the assembly of the materials used and increases their performance. Unlike traditional thatch, the prefabricated Quincha implies modular panels constituted by wooden racks filled with chipped canes and coated with mud or other material such as plaster or cement. Besides the bottom of the panels are fixed on a concrete base and vertically they rely on a structure of wooden columns.

The *Quincha Mejorada* developed by [PREDES-Centre for Studies and Disaster Prevention](#) operating in Peru is a wooden structure built on a foundation of plain or reinforced concrete, woven with reed and plastered with mud and mortar. Its roof is lightweight and can be in calamine, reed and mud, covered with concrete or tiles. The structural junctions have great strength and yet unmatched flexibility in absorbing seismic shocks. The PREDES Centre has developed important manuals and guides for the use of Quincha. In addition, PREDES has carried out for many years important projects to accompany processes of reconstruction after earthquakes and prevent damages from future disasters in areas with high rates of seismicity.

Similarly the [Practical Action](#) initiative and [Soluciones Prácticas](#) operating in Perú contribute from many years to the capitalization and dissemination of this technology, and accompany Quincha dwellings development projects in communities exposed to seismic risks.

The great availability of manuals and documents published on the *Quincha Mejorada* construction methodologies, demonstrates the positive effect it has on bio-construction. Further, it can also be useful for craftsmen and small companies willing to specialize in these bio construction technologies which valorise traditional knowledge and materials locally available.

#### To know more

[Manual PREDES Quincha Mejorada](#)

[Manual Soluciones Prácticas](#)

[Quincha prefabricada en teoriadeconstrucción.net](#)

[Practical Action](#)

[Technical information in La Bioguía.com](#)

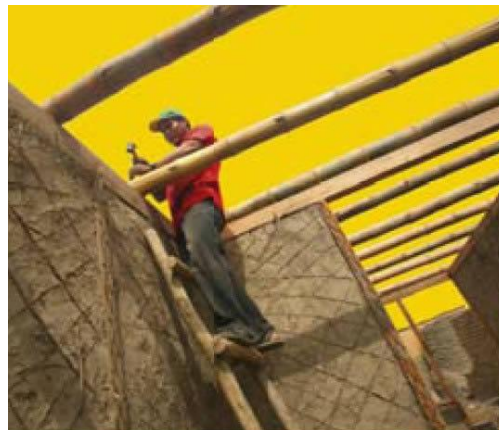
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[Apuntes de Arquitectura Digital.blogspot](#)

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**Cómo construir viviendas de quincha mejorada**



[Centrocidart.wordpress.com](http://Centrocidart.wordpress.com)

[Arquimagazine.com](http://Arquimagazine.com)

[Eartharchitecture.com](http://Eartharchitecture.com)

[ARSA Construcción Panel de Quincha](http://ARSA Construcción Panel de Quincha)

[Notechmagazine.com](http://Notechmagazine.com)

