

What can tradition teach us about architecture?

An article by the Global Landscape Forum

The Global Landscape Forum has published the interesting article ***What Can Tradition Teach Us About Architecture?*** The article is based on the fact that buildings have a profound impact on the planet: they account for about a third of global energy consumption, according to reports from the International Energy Agency. That figure includes not only emissions from construction but also temperature control, lighting and appliances. As the human population grows and the global climate continues to warm, the demand for energy is likely to continue to rise. But what if we could find the answers to today's problems by resorting to the traditional construction techniques used by our ancestors for millennia? There are too many examples to list, the article however summarizes three common principles shared by much of the world's traditional architecture.



The use of local materials

Long before air conditioning was invented and concrete became widely used, buildings relied on local materials and conformed to local lifestyles. Igloos, for instance, are made from a specific type of snow found in the Arctic homeland of the Inuit. Pueblo Native Americans traditionally used adobe for construction, while Kampung Houses built from bamboo, wood or palm leaves still stand in parts of Indonesia and Malaysia to this day. Similarly, old timber frame buildings and thatch roofing can be found in much of Europe, while yurts made of felt or fabric survive in Mongolia and Central Asia. In Iceland, locals adapted to a harsh climate and a lack of wood by constructing houses from turf. Many of today's buildings are built from concrete and steel, which account for roughly 15 percent of global carbon emissions and remain difficult to decarbonize. In comparison, materials like wood tend to be far less energy-intensive to make and can also be obtained from renewable sources. And although traditional building techniques have often fallen to the wayside, some advocates are consciously trying to revive them. The examples presented in the article concern the natural methods of use of mud and lime and the techniques which incorporate into architecture many parts of plants, like the roots, bark, leaves, stems, fruit, pump, seeds.



Harness the elements

Once buildings have been built, another major source of emissions is keeping them running. More than a quarter of global energy-related emissions is derived from building operations, including heating and cooling. Despite advances in insulation technology, emissions from cooling have nearly tripled since 1990 – and they are only expected to grow as the planet gets hotter and extreme heat becomes increasingly common. And yet, people have been living in very hot and cold parts of the world for millennia – long before air conditioning and gas heating were developed. In warmer climates, homes would be built underground to prevent exposure to the heat, or near a fountain to reap its evaporative cooling effects, or even painted white to reflect the sun's heat. One ancient cooling technology that has made its way into modern buildings is the windcatcher.. Commonly found in Iran, windcatchers are typically towers built on the tops of buildings with openings that allow air to travel in and out, improving ventilation and cooling buildings by up to 10 degrees Celsius..



Windcatchers are a good example of how ancient people in the Middle East used the wind as a renewable resource for cooling and ventilation inside the building,” says Payam Nejat, a researcher at Bauhaus-University Weimar who studies windcatchers. Windcatchers can come in a variety of styles, some with wetted surfaces to allow for evaporative cooling, and others channeling cooler air underground and into the building’s interior. After the cool air enters the building and absorbs heat, it can exit either back through the windcatcher or via the windows. Nejat points out that windcatchers are catching on in countries such as the U.K., and he believes they could play a major role in reducing building emissions and improving indoor air quality. “The other advantage of windcatchers compared to mechanical ventilation systems is the cost,” he adds. “We do not have moving parts, we do not have complicated systems, so the installation, maintenance and all general aspects of the cost are much lower.”



Blend into the natural environment

Traditional architecture does not just aim to get the best out of the elements and locally available resources. It is also about being an integrated part of the landscape and [forming ourselves within nature](#), rather than imposing ourselves upon it. Some communities, like the Tujia people of China, live in flood-prone areas encircled by steep mountains. How did they adapt? By building [houses on stilts](#), some of which can still be found outside the city of Chongqing. Centuries ago, what is now [Mexico City](#) was the ancient Aztec capital of Tenochtitlan, located on an island surrounded by five large lakes. Faced with a shortage of farmland, its natives built a series of artificial islands called [chinampas](#), which served as floating gardens that fed hundreds of thousands of residents. Today, only about 2,000 hectares of chinampas remain, and Mexico City’s lakes were eventually drained by Spanish colonizers – but some of the city’s residents are working to revive them. For many Indigenous Peoples, architecture is an important element of traditional knowledge, and even seemingly mundane features like a [building’s orientation](#) can hold plenty of spiritual significance. By preserving this knowledge, they are fighting back against the cultural erosion wrought by centuries of colonialism. And for all of us, the inspiration that we can draw from our ancestors to guide us through the climate crisis.



To know more

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The Global Landscape Forum aspires to create a movement of 1 billion people around sustainable landscapes by 2030. The Global Landscapes Forum (GLF) is the world’s largest knowledge-led platform on integrated land use, dedicated to achieving the Sustainable Development Goals and Paris Climate Agreement. The Forum takes a holistic approach to create sustainable landscapes that are productive, prosperous, equitable and resilient and considers five cohesive themes of food and livelihoods, landscape restoration, rights, finance and measuring progress. It is led by the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF), in collaboration with its co-founders UNEP and the World Bank and Charter Members. [Charter members: CIAT, CIFOR-ICRAF, CIRAD, Climate Focus, Conservation International, Crop Trust, Ecoagriculture Partners, The European Forest Institute, Evergreen Agriculture, FAO, FSC, GEF, GIZ, ICIMOD, IFOAM - Organics International, The International Livestock Research Institute, INBAR, IPMG, IUFRO, Rainforest Alliance, Rare, Rights and Resources Initiative, SAN, TMG-Think Tank for Sustainability, UNCCD, UNEP, Wageningen Centre for Development Innovation part of Wageningen Research, World Farmer Organization, World Bank Group, World Resources Institute, WWF International, Youth in Landscapes Initiative \(YIL\)](#)