Am

Tropical Monsoon Climate

Location Examples:

- Cairns, Queensland, Australia
- Taitung, Taiwan
- Miami, Florida, USA
- San Juan, Puerto Rico

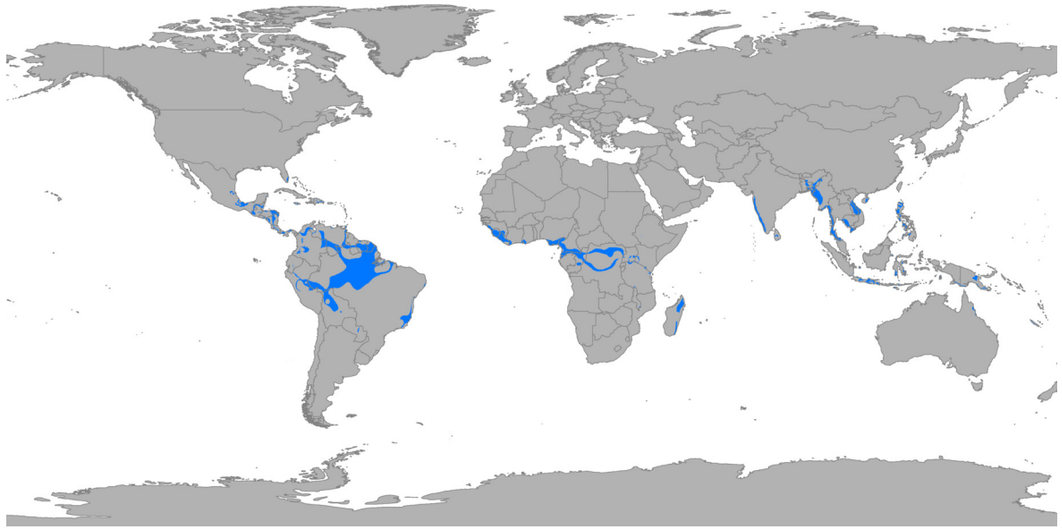
study
By Larissa Sattler

Tropical monsoon climates experience average temperatures above 64°F (18°C) all year with little variation in temperature. Additionally, this climate zone is typically found close the paths of monsoons, which causes a seasonal change in wind direction.

Materials used in this climate may range and include, but not limited to, stone, glass, wood, and recycled for both interior and exterior use. Furthermore, due to the large amount of rainfall throughout the year and potential for devastating storms a more durable material would be recommended

Sources:
https://en.wikipedia.org/wiki/Tropical_monsoon_climate

https://www.britannica.com/science/Koppen-climate-classification

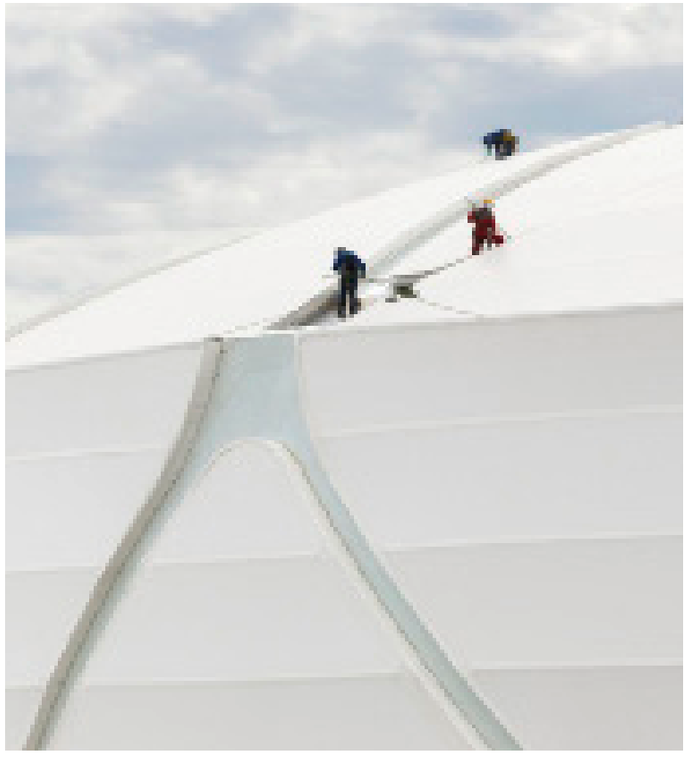


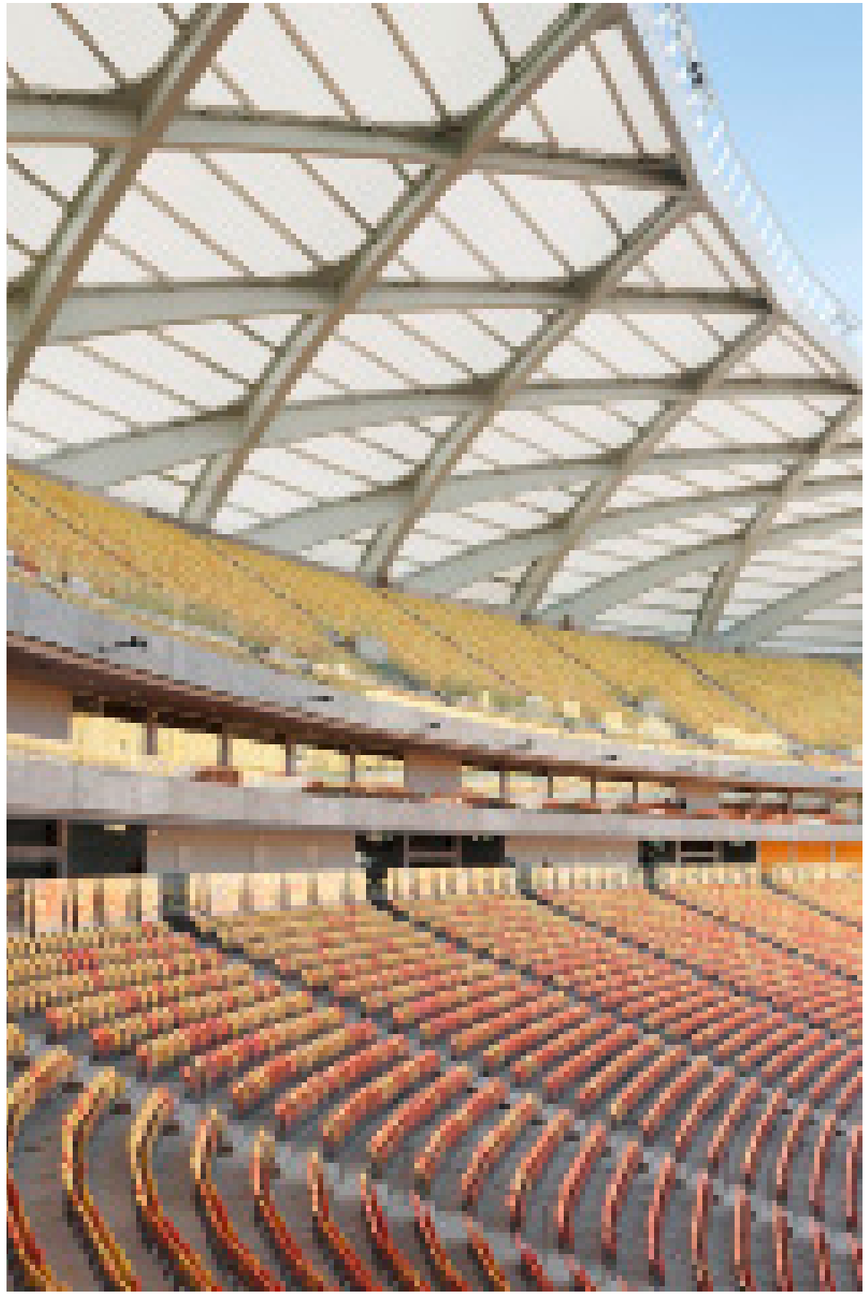
Cairnes, Queensland, Australia

Amazon's Arena Stadium

case study
By Zhuoying Chen

Location: Manaus, Amazonas, Brazil





Architect: Gmp Architects

Owner: Companhia de Desenvolvimento do Estado do Amazonas

Year of completion: 2014

Climate: Am (Tropical Monsoon Climate)

Material of interest: Translucent glass fiber fabric

Application: Facade, roof

Properties of material:

- High Tensile Strength
- Durability
- Good Thermal Conductivity
- High Heat Resistance, Good Chemical Resistance, Fire Resistance
- Outstanding Electrical Properties

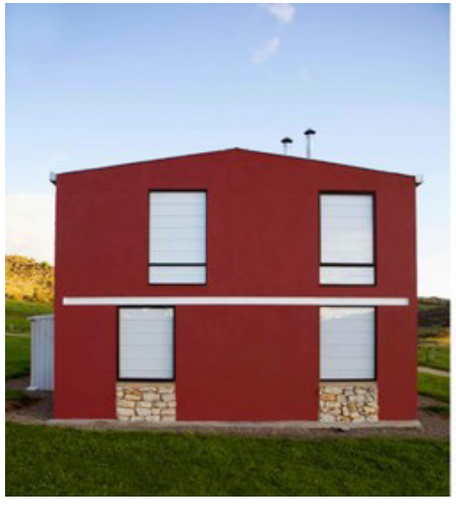
Sources:

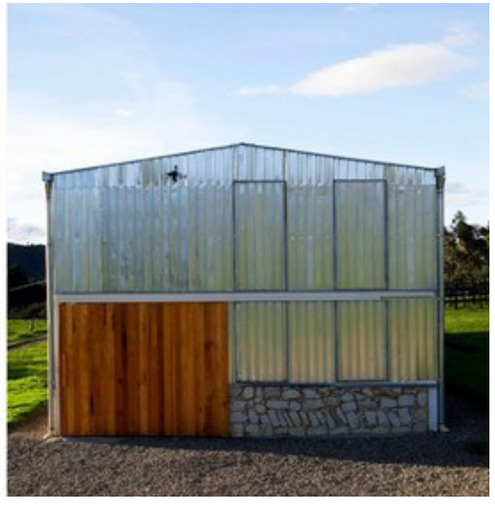
https://www.archdaily.com/527272/arena-da-amazonia-gmp-architekten?ad_medium=widget&ad_name=category-stadiums-article-show

Barn House

case study
By Patrick Murray

Location: Colombia





Architect: Oficina Informal

Owner: N/A

Year of completion: 2008

Climate: Am Tropical Monsoon

Material of interest: Recycled Wood

Application: Doors, interior lofts, cabinetry, side house

Properties of material: wood is recycled and re-used from past projects and from local fallen trees

Sources:
https://www.archdaily.com/123484/barn-house-oficina-informal

Plastic Bottle Village

case study
By Larissa Sattler

Location: Isla Colón in Bocas Del Toro, Panama

Architect: Robert Bezeau

Owner: N/A

Year of completion: 2016

Climate: Tropical Monsoon Climate

Material of interest: Recycled Plastic Bottles

Application: Exterior

Properties of material: Millions of plastic bottles have been upcycled to create a new housing village. The plastic bottles, filled with air, act as an inslator. They are secured in steel cages, which provide both flexibility and rigidity therefore in the event of an earthquake the structure will remain in tact.

Sources:

http://www.plasticbottlevillage-theline.com/

Shell Mycelium

case study
By Hua Yinghua

Kerala, India

Architect: Beetles 3.3&Yassin Arredia Design

Owner: N/A

Year of completion: 2017

Climate: Tropical monsoon climate

Material of interest: Mushroom mycelium

Application: Structure

Properties of material: As an alternative construction material that is particularly suitable for building temporary structures, thanks to its environmentally friendly properties. The unique characteristic of the material is that can merge with the framework to which it is added. In the case of the Shell Mycelium pavilion, the material became combined with a triangulated timber framework.

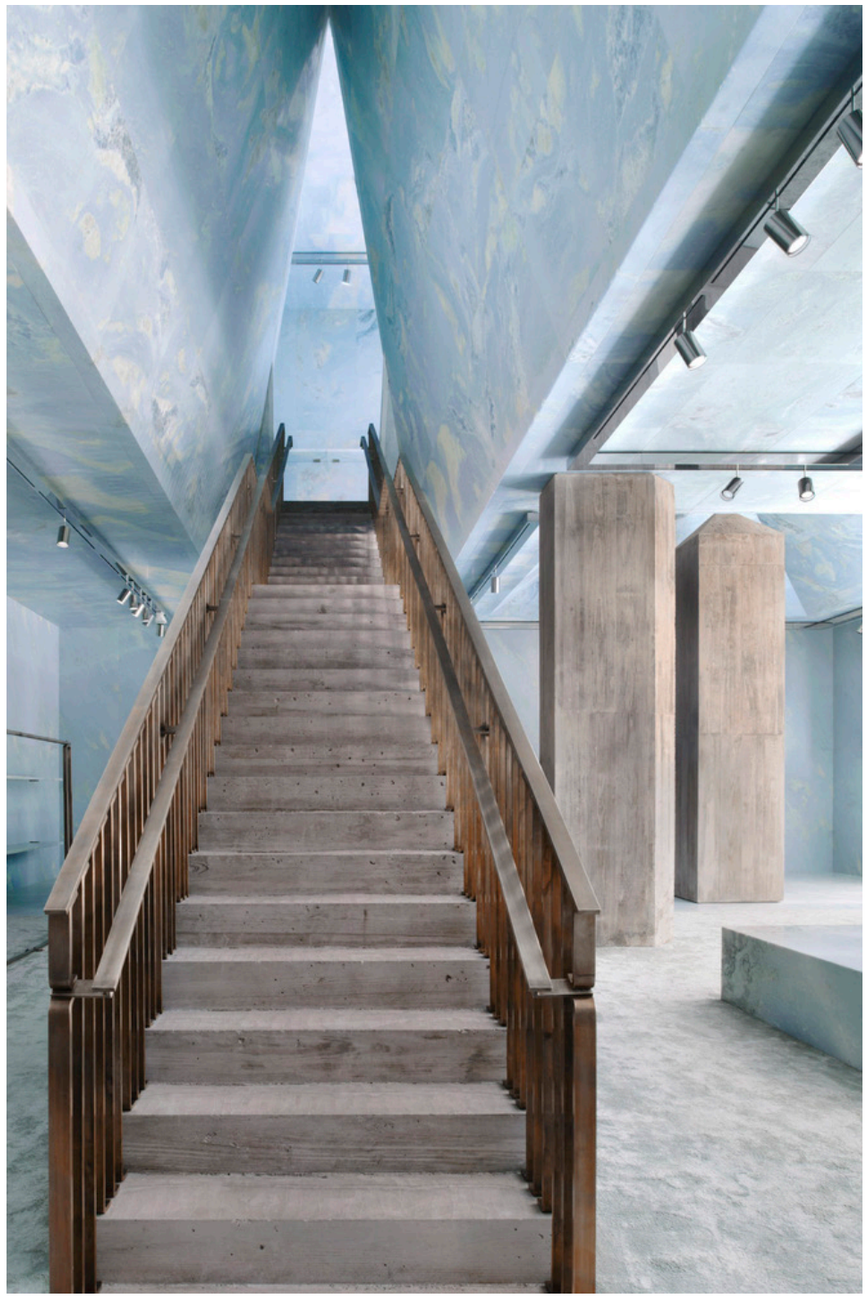
Sources:

https://www.dezeen.com/2017/08/26/shell-mycelium-fungus-pavilion-beetles-3-3-yassin-arredia-design-kerala-india/

Céline Flagship Store

case study
By Shijing Zhu

Location: Miami, Florida, United States



Architect: Valerio Olgiati

Owner: N/A

Year of completion: 2018

Climate: Tropical monsoon climate

Material of interest: Pinta Verde (Marble)

Application: Exterior and interior

Properties of material: A marble shell is laid over an existing two-storey structure. The facades, floors, walls, ceilings are entirely made of marble. The blue-green Pinta Verde from Brazil is exceptional and creates a wonderful atmosphere for Céline.

Sources:

https://www.archdaily.com/901267/celine-flagship-store-valerio-olgiati