



Traditional, vernacular and historical architecture



Erasmus+

Traditional, vernacular and historical architecture.

HS

Heritage and Society

EC

Elective Courses



Traditional, vernacular and historical architecture.



Heritage and Society



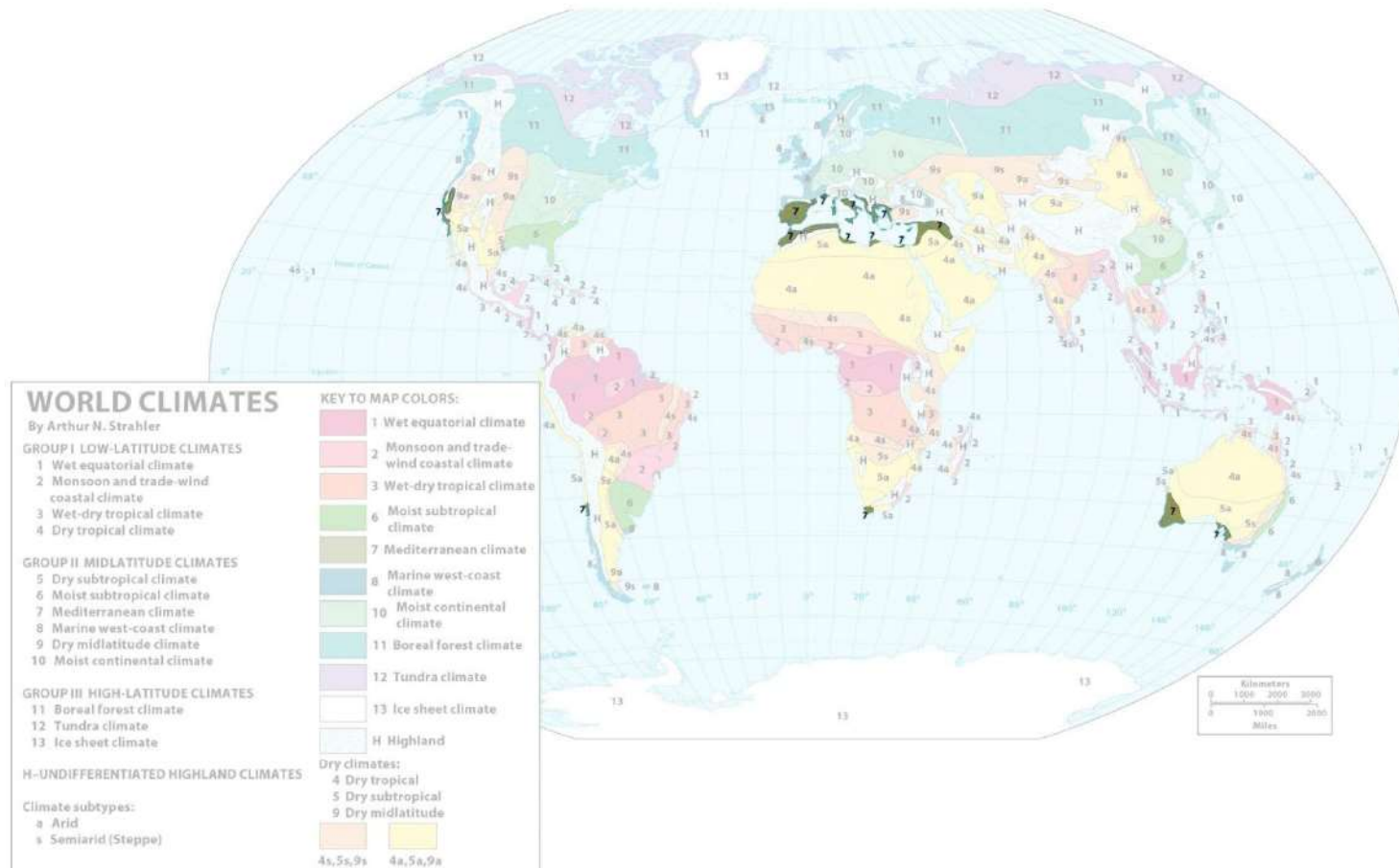
Elective Courses

1. Introduction to vernacular architecture.
2. Main climatic areas around the world and bioclimatic strategies. Low latitude climates.
3. Main climatic areas around the world and bioclimatic strategies. Medium latitude climates.
4. Main climatic areas around the world and bioclimatic strategies. High latitude and undefined location climates.
5. Materials and constructive systems in vernacular architecture.
- 6. Vernacular architecture in Europe: Mediterranean coast.**
7. Vernacular architecture in Europe: Atlantic coast.
8. Vernacular architecture in Europe: Central Europe.
9. Vernacular architecture in Europe: Nordic area.
10. Vernacular architecture in Europe: High mountain areas.
11. Vernacular architecture: Singularities I: Caves.
12. Vernacular architecture: Singularities II: Architecture and production.
13. Vernacular architecture: Singularities III: External Influences.
14. Vernacular architecture and landscape.
15. Spanish traditional architecture.

Traditional, vernacular and historical architecture.

LESSON 06. Vernacular architecture in Europe: Mediterranean coast.

MEDITERRANEAN CLIMATE



MEDITERRANEAN CLIMATE

Hot dry summers and rainy winters.

Wide temperature oscillation during the year. Clearly differentiated seasons.



ARCHITECTURE CHARACTERISTICS ACCORDING TO CLIMATE

- a. Urban layout and building shape.
- b. Shading and use of natural ventilation.
- c. Reduction of heat losses and taking advantage of solar radiation when needed.

a. Urban layout and building shape.

- Compact urban layout reduces the number of surfaces exposed to the sun and avoids hot air circulation.
- Narrow streets and covered galleries protect pedestrians from harsh summer periods
- Compactness of buildings as main form factor.



Qalaar al Manika, Siria



Hacienda Algarrobo, Málaga (Spain)

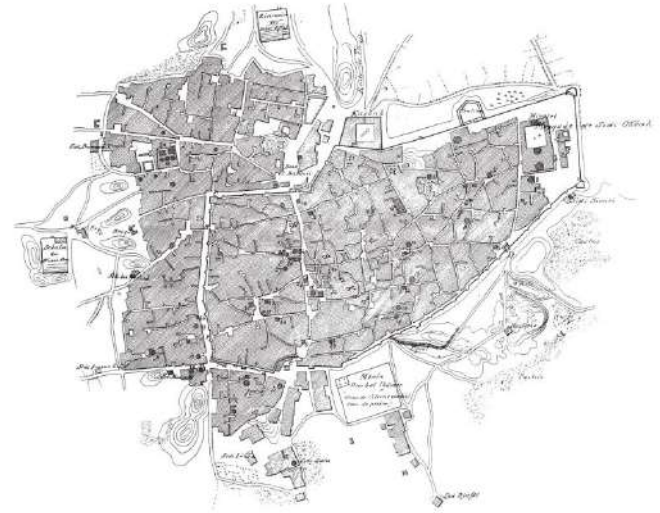


Rovinj (Croatia)

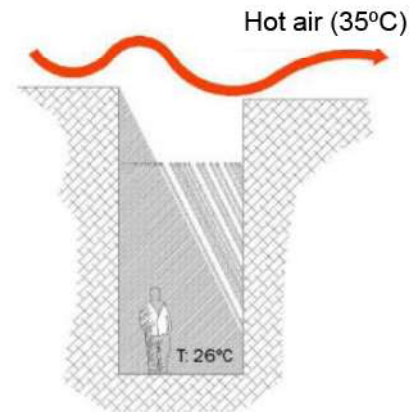


Lucca (Italy)

Typical muslims cities layout.
Compact and clustered settlement.



Ghardaia, M'Zab (Argelia)





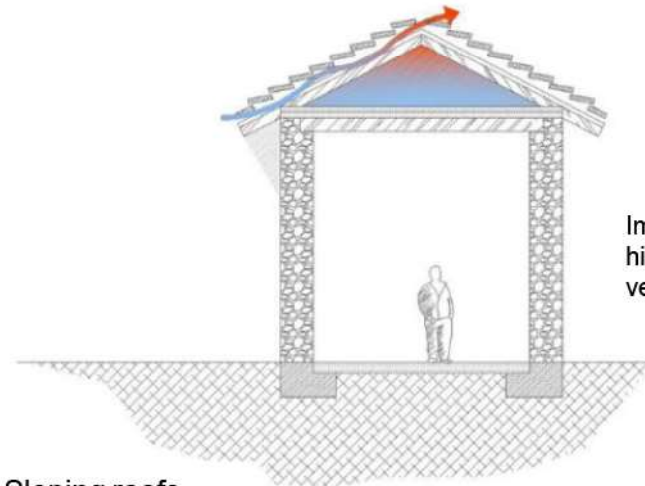
Brick vaults
El Cairo, Egypt



Brick vaults
El Cairo, Egypt



Sloping roofs
Comares, Spain



Improvement of
highthermic conditions by
ventilating under tiles

b. Shading and use of natural ventilation:

- Proper shading for windows using screens.
- Use of grids to allow both shading and ventilation.
- Small openings to avoid direct sunlight indoors.



Window with latticework
Deir Ghassaneh, Palestina



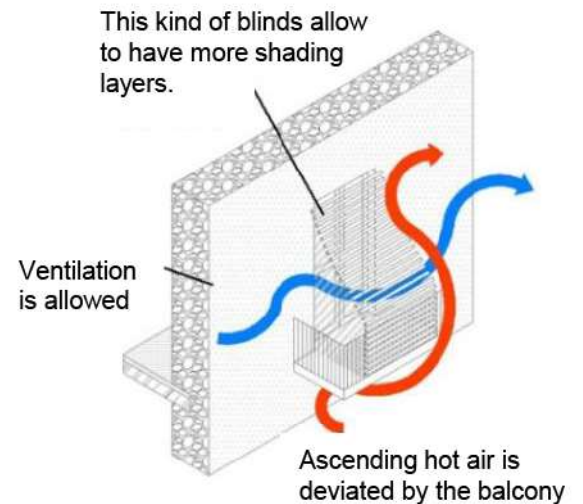
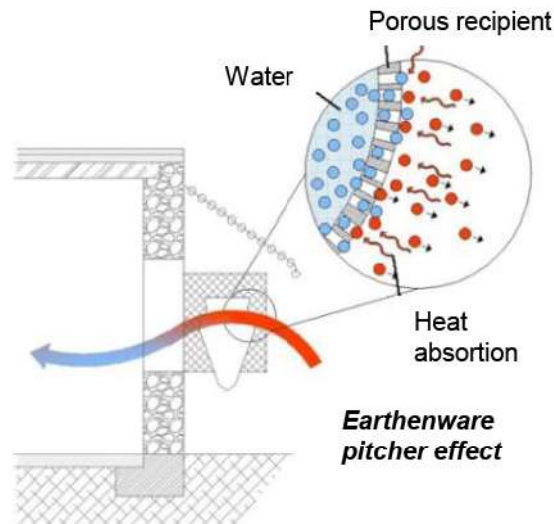
Evaporative cooling in window
A.Konya



Alicantina blind
Sabadell, Spain



Shutter
Avión, France

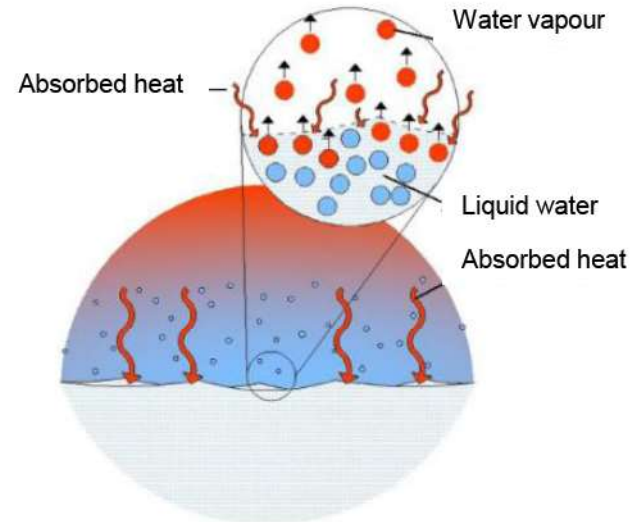


c. Reduction of heat losses and taking advantage of solar radiation when needed:

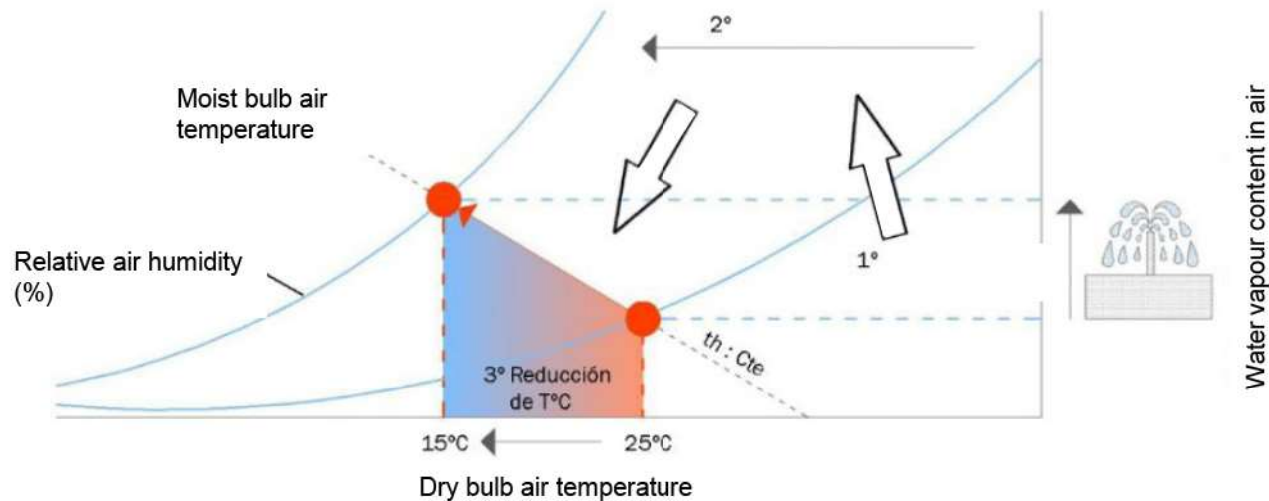
- Thatched roofs. They have insulating properties with the use of a common cheap material.
- South-facing balconies. The orientation to south allows to get maximum sunlight in winter and minimum in summer, allowing better thermal conditions indoors.



Evaporative cooling
Alhambra, Spain



Evaporative cooling

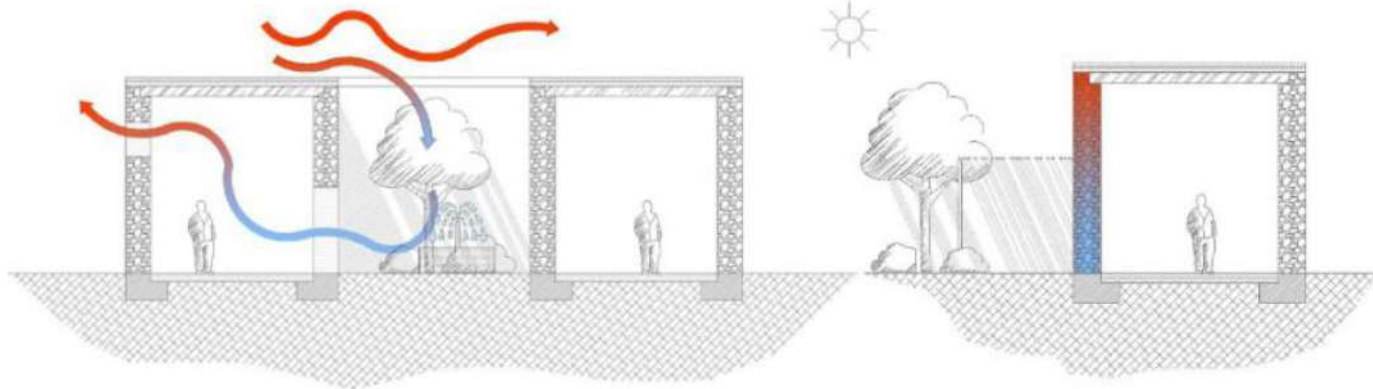




Patio. Coal's courtyard
Granada, Spain



Porch
Guadalhorce's Valley, Spain



Patios help achieving comfort with ventilation

Porches help achieving comfort by shading

CONCLUSIONS

The traditional Mediterranean architecture responds to the climatological needs, whose main strategies of protection of the exterior are based on:

- Incorporation of high thermal mass offering thermal stability (regulates temperature peaks),
- Protection from solar radiation, preferably with adjustable elements,
- Evaporative cooling (the environment is cooled by evaporating water)
- Convective cooling with the inclusion of patios.

EXAMPLES

Mijas, Málaga (Spain)



Trulli in Alberobello, Apulia (Italy)



Santorini Island (Greece)





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