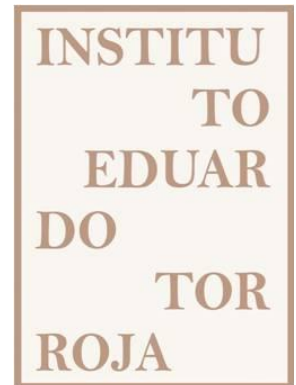# Methodological approach to the evaluation of the CLT for use in service class 3

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INSTITU TO EDUAR DO TOR ROJA

CSIC
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

Sustainability policies

Background

Use Class 1

Use Class 2

Service Class 1

Service Class 2

Background

Wood based products

B   Use Class

A   Service Class

A   Service Class

Degradation

norma española

UNE-EN 1995-1-1:2006/A2

Service Class 3

Julio 2015

TÍTULO

Eurocódigo 5: Proyecto de estructuras de madera

Parte 1-1: Reglas generales y reglas para edificación

AENOR

Above ground and exposed to the weather (particularly rain)
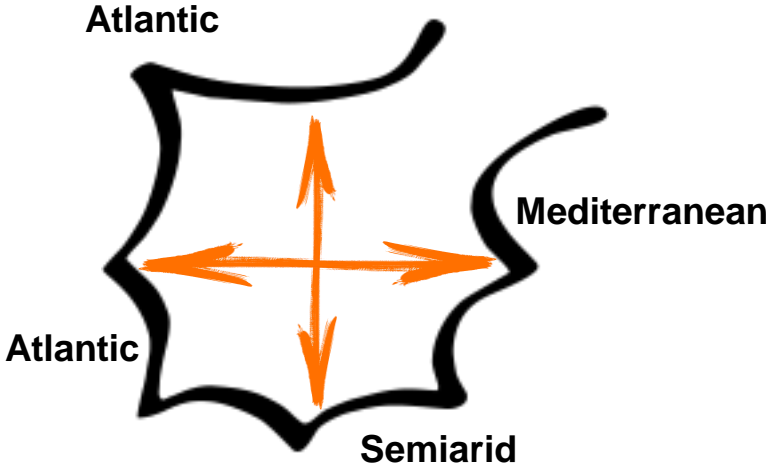
AENOR

Limited wetting conditions

COST FP1303
Performance of bio-based building materials

Scope

Natural ageing : OUTDOOR   Artificial ageing : LABORATORY

COST FP1303
Performance of bio-based building materials

Durability / Perfomarnce

Outdoor ageing

Climate

Atlantic

Mediterranean

Atlantic

Semiarid

Topography

Spanish Climate

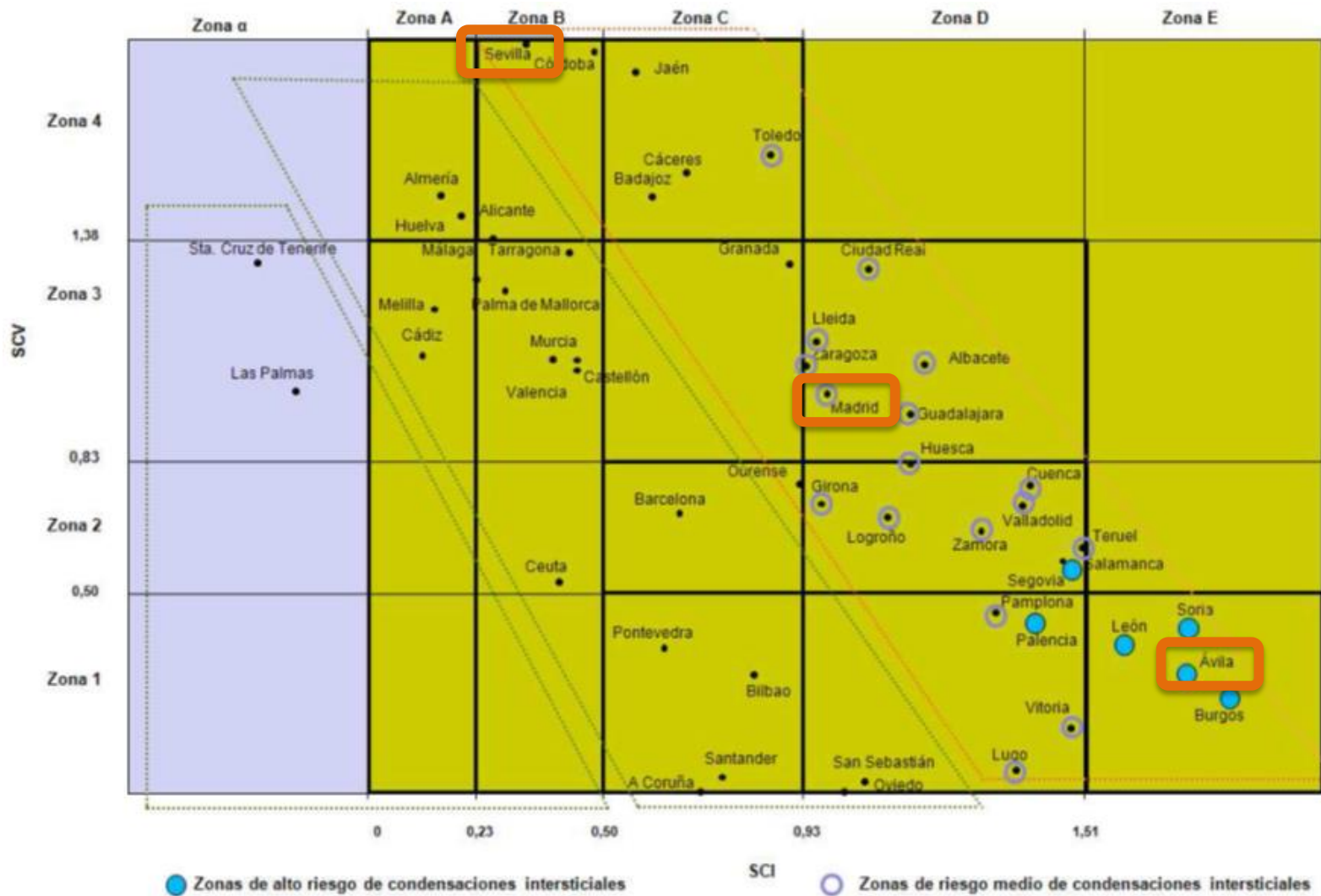CTE Climate

Madrid

interstitial condensation
Climate CTE type D
Winter
Summer

Sevilla

↓ interstitial condensation
Climate CTE type B
Winter
Summer

Avila

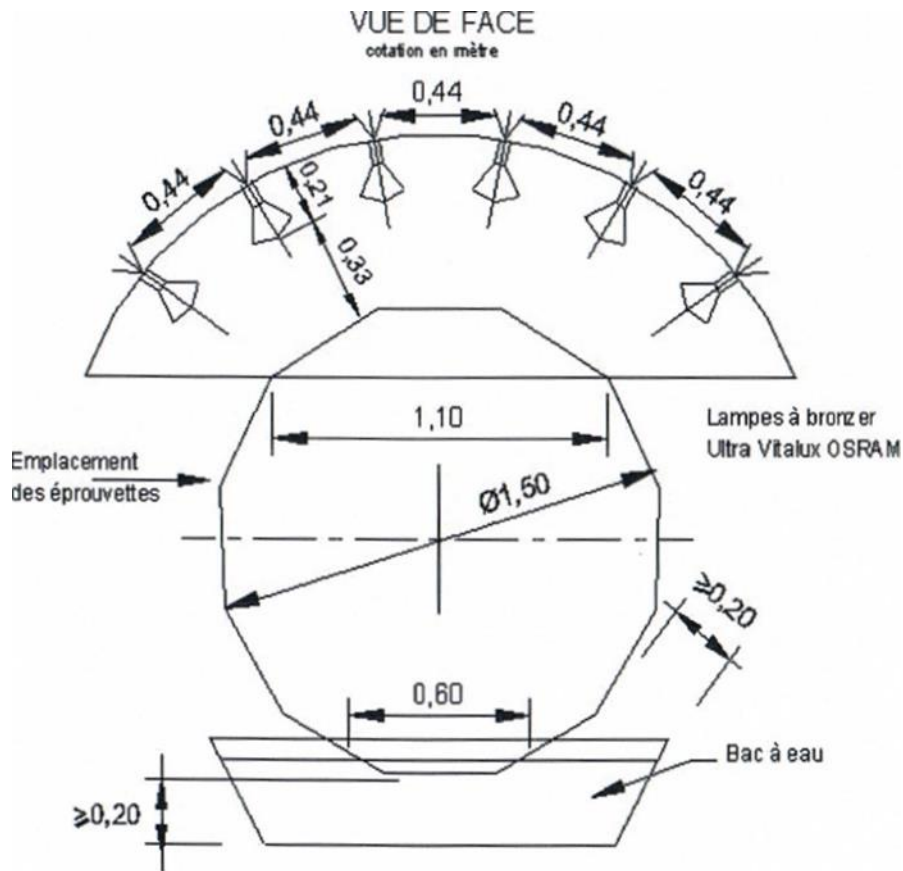↑ interstitial condensation
Climate CTE type E
Winter
Summer

COST FP1303
Performance of bio-based building materials

Climate Selection

Ageing Wheel

Climatic Chamber

Artificial rain

Laboratory ageing

TEST 1:

5 days (80 cycles)

Equivalent to the average rainfall in Madrid during a year.

TEST 2:

30 days (480 cycles)

Equivalent to the average rainfall in Madrid during 6 years.

Ageing Wheel

TEST

7 days (1 cycle)
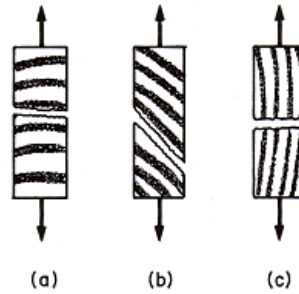
3 days of artificial rain

Service Class 3

4 days of dry period

Service Class 1

With this cycle we can move from service class 1 to service class 3

COST FP1303
Performance of bio-based building materials

Climatic Chamber

RTP TEST
(tension perpendicular to the grain)

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