Overview of overheating calculation methods in European building energy codes and standards

Please fill out the following table regarding the status in your country. Feel free to develop the answers.

1. What is the thermal comfort limit for residential buildings in your country?

1.a.1. *Explain shortly the reference standards used in your country to evaluate thermal comfort in residential buildings.*

1..a.2. What is your comfort standard?

1..a.3. On what your comfort model is based?

1.a.4. What are the overheating criteria for residential buildings in your country?

1..a.5. Cite the reference, and share the reference in pdf format if possible.

1.a.6. Please fill out the following table regarding overheating in your country. Feel free to elaborate on your answers.

Table 1: Overheating assessment

Criteria	Your Country
<u>Climate and weather data</u>	
Is comfort dependent on national geographic climate zones? If yes, list them.	
Do you have a specific comfort calculation approach for heat waves?	
Do you take into account the urban heat island effect?	
Does your overheating methodology take into account future climate change weather files with extreme scenarios?	
<u>Occupant type and representation</u>	
What type of building type does your comfort standard deal with?	
Does your method embrace the four occupant categories (I, II, III, IV)? *	
How do you represent occupancy presence in the simulation model?	
<u>Comfort model</u>	

What is overheating provisions period coverage?	
What is your overheating indicator?	
Is your comfort model based on an adaptive (like EN 15251 / 16798) or static (like Fanger) method?	
What are your comfort thresholds?	
What are your overheating thresholds? and according to which standard are those thresholds defined?	
Is there a distinction between naturally ventilated, air-conditioned, and mixed mode buildings?	
Does your model take into account local personalized heating/cooling & ventilations systems (ceiling fans, air-conditioned chairs, electric heating mattresses…)?	
<u>Simulation model</u>	
Is your calculation based on a static/quasi-dynamic/dynamic model? What is the calculation timestep?	
Is your overheating calculation based on a single or multizone model?	
Does your calculation distinguish sleeping rooms from other living areas?	
<u>Mandatory envelope requirements</u>	
Does your method oblige the installation of external shading?	
Does your method oblige the limitation of the window to wall ratio? If yes, what is the limit?	
Does your method recommend a g-value? If yes, what is the limit?	
* we are focusing on category II occupants for new and renovated buildings	

1b. Do you have fuel poverty problems in your country that might influence overheating risk in residential buildings? Explain.

1.c.2. What is the overheating risk for residential buildings (highly insulated) in your climate?

1.c.3. How do you evaluate overheating risk in residential buildings in your country? Please share the calculation method and overheating hours limit threshold.

1.d. Can we rely on passive cooling or must include active cooling systems for residential buildings in your country for residential buildings?

Other things to add ?