ASIEPI – 1st Meeting

The Aim

The objectives are to make the MS aware of the potential problems for a correct assessment of summer comfort conditions and, if applicable, the energy use for cooling and to give suggestions (pro and cons for different approaches, primarily based on experiences in other countries) about attractive approaches.

WP Leader

NKUA

WP Participants

NKUA,
BBRI
TNO
IBP
CSTB
FEUP
ENEA
AICIA
NAPE

The Aim

The activities must permit collection of information about the practical experiences from MS who already have for a while specifications regarding summer comfort and A/C. To what extent is summer comfort directly or indirectly taken into account and which are the key parameters?
Actually, regulations are limited in the calculation of the cooling load and in limited countries in the definition of a maximum allowed energy consumption for cooling. However, when the summer performance of a building is evaluated in terms of the 'cooling load', the message given is that the building needs 'cooling / air conditioning', probably not too much but still that a refrigeration 'engine' has to be used. Use of alternative methods to express the summer performance of buildings like the balance point temperature of a building is a fairer and better understood approach.

The Aim

It also is important to collect information on past developments in the MS regarding summer comfort, e.g.: Summer comfort was in the Netherlands in the beginning no issue of concern. Why was this? How has it progressed? Summer comfort was also in France not a specific issue of concern in the RT2000. Why? What are the developments? What are the difficulties?
Evaluation of the existing situation regarding the implementation and the impact of the existing methods to achieve summer comfort in the MS.
Identification of the experience on alternative cooling techniques and advanced calculation methods in the MS and elsewhere (e.g. US and Australia).
Assessment of benefits for the MS when alternative techniques are used.
Investigation of procedures to integrate alternative cooling assessment methods into the existing calculation methods. .

The Tasks

Seven Tasks :

Task 1. Collection, analysis and guidance about the approaches used by the MS regarding summer comfort and/or air conditioning energy performance calculation methods

Task 2. Collection, analysis and guidance regarding additional requirements related to summer comfort and air conditioning

Task 3. Collection, analysis and guidance regarding the handling of alternative cooling techniques

Task 4: Collection, analysis and guidance regarding alternative cooling calculation methods

The Tasks

Seven Tasks :

Task 5: Generation of content for dissemination activities

Task 6: Summary report

Task 7: Horizontal interaction and coherence

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Task 1. Collection, analysis and guidance about the approaches used by the MS regarding summer comfort and/or air conditioning energy performance calculation methods

In this task, the focus is on the way MS integrate the summer comfort and/or energy use for air conditioning in the overall calculation of the energy performance of a given building. Possible existence of such calculation methods in the MS will be identified and the specific experience of the MS will be evaluated, including positive and negative aspects.

ASIEPI aims not to evaluate the specific calculation methods technically and will not develop a new standard.

Duration of the Task:

18 months.

Start: 1st Month

End: 18th Month

Deliverable of this work task

D7.1 - Month 18: A report on the collection, analysis and guidance about the approaches used by the MS regarding summer comfort and/or air conditioning energy performance calculation methods

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Task 2 : Collection, analysis and guidance regarding additional requirements related to summer comfort and air conditioning

In this task, the focus is on the additional requirements imposed by countries in order to limit summer comfort problems and/or the use of air conditioning, e.g.:

Limiting the area of glazed surfaces
Limiting the amount of solar gains
Specific mandatory overheating criteria
Requirements regarding shading
Minimum efficiency of active cooling devices

Duration of the Task:

18 months.
Start: 1st Month
End: 18th Month

Deliverable of this work task

D7.2 - Month 18: A report related to the Collection, analysis and guidance regarding additional requirements related to summer comfort and air conditioning

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Task 3 : Collection, analysis and guidance regarding the handling of alternative cooling techniques

In this task, the objective is to evaluate to what extent interesting alternative cooling techniques are covered by the procedures used by the MS and how this is done. For this task, there is interaction with tasks 1 and 2.

Some of these techniques probably are not covered by MS regulations and should be considered as innovative systems. Therefore, there is for this task a clear interaction with WP 6.

Duration of the Task:

18 months.
Start: 9th Month
End: 27th Month

Deliverable of this work task

D7.3 - Month 27: A report related to the Collection, analysis and guidance regarding the handling of alternative cooling techniques

Task 4 : Collection, analysis and guidance regarding alternative cooling calculation methods

The task aims to collect and analyse all the specific experience of the MS and other countries, on alternative cooling and summer comfort calculation methods. The most relevant methods will be studied in detail with an indication of advantages and disadvantages. The impact of the methodology on the summer energy consumption of the building stock in some EU countries will be assessed. The analysis of the methodologies and of the corresponding impact on the energy consumption of buildings will be used as the basis to formulate recommendations regarding alternative thermal comfort and summer performance calculation tools This task aims to identify the main benefits when alternative methodologies to assess summer comfort and summer performance of buildings are in use. The task will try to identify the main requirements necessary in each MS to implement such a methodology. Also, the main constraints and limitations as well as the possible problems will be identified. Comparative simulations for buildings using the present regulatory calculation methodologies as well as the alternative methodologies will be performed to assess the benefits of the alternative methods.

Duration of the Task:

15 months.
Start: 12th Month
End: 27th Month

Deliverable of this work task

D7.4 - Month 27: A report related to Collection, analysis and guidance regarding alternative cooling calculation methods

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Task 5 : Generation of Contents for Dissemination Activities

The collected information will be used to produce guidance for MS regarding the various options (with pro's and con's for the different approaches). The overall work will be performed by the participants in the project with support from the national contact points and the experience gathered within ES-SO and EUROACE. A standard questionnaire will be created and used.

Task 5.1: 5 Information Papers (see deliverables),
Task 5.2: Provide WP7 related information to the EPBD Buildings Platform databases (publications, standards, events, websites),
Task 5.3: Handling of a limited amount of specific WP7 related questions asked to the EPBD Buildings Platform helpdesk,
Task 5.4: Content and programme management of 2 internet based information sessions,
Task 5.5: 2 PowerPoint Presentations (including voice recording) to be published as "presentations on demand" that can also possibly translated to national languages by all partners.

Duration of the Task:

15 months.
Start: 12th Month
End: 27th Month

Deliverable of this work task

D7.5 - Month 29:
-5 Information Papers
-Information for the BP
-Questions for the BP helpdesk
- 2 internet based information sessions
-2 PPT presentations on demand

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Task 7 : Horizontal interaction and coherence

The WP-leader will not only take responsibility for the proper progress of his own WP, but throughout the entire project he will constantly seek to maximize information exchange and achieve a unified philosophy with all other technical work packages (WP 2 to 7). This will include the following activities:

- distil experiences/insights from its own WP that can be valid for the common approach, and present these views to the general project management and the other WP-leaders (e.g. at the project meetings, at the frequent webex steering meetings among the WP-leaders, by intermediate mail communication, etc.)
- participate, together with the project management, in the discussions about the different aspects of the common methodology throughout the different WPs
- fully implement on a continuous basis in its own WP the decisions on common philosophy that have been taken collectively

Action to
NKUA

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