

Activities in 2003 focussed on the UTCI development. The health impact of the heatwave in west and southwest Europe in terms of 25000-35000 extra deaths showed drastically the importance of appropriate assessment procedures to be applied by NMHSs in heat health warning systems on a routine basis.

- I** To remind, it was agreed in the Freiburg workshop in 2001 that **UTCI**
- (1) will be a temperature index, i.e. the air temperature of a reference environment that provides the same heat exchange conditions as the actual environment under consideration,
  - (2) should cover the whole continuum of thermoregulation. That implicates that there is a relative wide range of thermal conditions within which people theoretically are able to adapt by behaviour (here: clothing) in order to keep comfort,
  - (3) will deal with total body conditions as well as with bare skin problems to avoid frostbite risks,
  - (4) will be based on the most advanced multi (65)- node models of human thermoregulation.
- II** Ad (1): To keep the email discussion running was sometimes a difficult venture. However, ISB-Commission 6 came out with the following solution: wind calm (just 1.1 m/s in the height of the individual induced by walking), mean radiant temperature  $T_{mrt} = T_a$ , relative humidity  $rh=50\%$ , metabolic rate = 135 W/m<sup>2</sup> (4km/h), adaptation by variation of clothing (see 2).
- Ad (2): It is assumed that people adapt by clothing more or less reasonable to the thermal environment in a wide range of heat exchange conditions in order to achieve thermal comfort (probably 0.5-2.0 clo). Outside the theoretical comfort range the clothing value will be kept fix.
- Ad (3): This requires at least a model that distinguish between bare skin and covered compartments. It seems reasonable to revert to an already published model. However, it is understood that everybody can use any model that fulfils demonstrably and sufficiently the model comparison (see 4).
- Ad (4): The some thousand simulation results of Dusan Fiala's et al. 65-node model (combinations of  $T_a$ ,  $T_{mrt}$ ,  $v$ ,  $rh$ ,  $clo$ ) available for comparisons as Excel files. Richard de Dear took care to manage comparable input conditions for the Japanese Tanabe 65-node model. So I bargain for the results shortly. Unfortunately the American Berkley group was not able to participate. So the physiological data base is defined by the two mentioned model outcomes plus the findings of the Michel Ducharme/ Randall Oschewski institute for the very cold end.
- III** The next step will be (1) that the modellers compare the outcome of their models with the data provided by the simulations with the help of the multi-node models and (2) to discuss how to assess the physiological data in terms of a single index.
- IV** The UTCI development belongs also to the ToRs of the WMO-CCI Expert Team on "Health Related Climate Indices". During the annual meeting of the WMO EC LV in May 2003 the according activities were explicitly recognized and their importance were stressed out.
- V** There was a change in the chair of ISB-Comm. 6. Abdel Maarouf resigned due to other projects and Richard de Dear agreed to take the position as co-chair.