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# Editorial

## Climate Change and Occupational Heat Problems

In many parts of the world ongoing climate change during the last three decades has produced higher temperatures and occupational heat stress levels in both outdoor and indoor workplaces[1, 2]. Working people are particularly exposed to these heating trends in tropical and sub-tropical countries, where excessive workplace heat exposures linked to the outdoor ambient thermal environment are a traditional part of local life, but heat waves in cooler countries are also affecting workers health and productivity[3].

Outdoor work is avoided by local people during the hottest part of the days in the hot season, as the heat stress from air temperature, humidity and wind, and the additional heat load from solar heat radiation, overwhelms the human physiological capacity to maintain thermal balance[4]. High workplace heat exposure is connected to various clinical effects and also to increased incidence of occupational injuries[5].

The notion that indoor workers are generally sufficiently protected via air conditioning, fans or other cooling systems does not apply to most industrial workplaces in low and middle income countries in hot parts of the world[6, 7]. These are the countries where most of the global population lives. Rapid urbanization in Asia, Africa and Latin America adds to the local heat exposures via great amounts of construction work[8] and the Urban Heat Island effect[9].

The lack of technical protection against heat is an important threat to the health and productivity in workplaces. Future climate change will make this situation worse for millions, and maybe even billions, of working people[10]. Daily life non-work activities are also affected by high heat exposures, and for most poor people there is no distinction between work and daily chores.

This special issue of Industrial Health presents papers on different aspects of occupational heat problems in relation to climate change. The papers present examples from different parts of the world, and highlight methods for heat exposure assessment[11], standards for occupational heat exposures[12, 13], and the health and productivity risks of workplace heat in relation to climate conditions and climate change[14]. A small scientific conference on "Occupational heat exposure indicators for use in climate change impact assessments" was held in Lund, Sweden, in August 2012, and many of the papers in this collection are based on presentations in Lund. A joint report from the conference and related materials are planned for publication later in 2013.

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