

Environmental Studies Departmental Seminar



Speaker: *Evyatar Erell*

Title: *How important is urban air temperature?*

Date: Dec.20, 2016

Time: 13:15 (refreshments served at 13:00)

Venue: Seminar Room, Bona Terra
Dept. MID

Abstract: It has become almost an article of faith among researchers and the green building movement that a primary objective of applied urban climatology is to mitigate urban heat islands. The topic has attracted extensive research, and policies for urban heat island (UHI) mitigation are promoted all over the world by bodies as diverse as the US Environmental Protection Agency and the EU.

The justification for such policies includes promised benefits such as reduction of energy consumption in buildings; improved outdoor pedestrian thermal comfort; lower excess mortality during summer heat waves; and improved urban air quality through reduced ozone formation. The urgency of implementing the proposed policies is further justified by concerns about the combined effect of UHIs and global warming.

There is in fact overwhelming and irrefutable evidence for correlation between increasing air temperature and several negative outcomes. Yet the talk will demonstrate, through a series of studies on different features of the urban microclimate carried out over a period of several years, that emphasis on air temperature reduction might lead to policies that are at best ineffective and in some cases could even be counter-productive.

It will argue that effective implementation of urban climatology requires that we first define the objectives of the intervention in a meaningful manner: Mitigating UHIs in general, and air temperature modification as such in particular, may not be a useful end in itself. Thermal comfort, energy conservation and good air quality, on the other hand, are worthy objectives - but air temperature is often but one of several factors interacting in complex ways to affect them.

