Table 2: Mediating processes and direct and indirect potential effects on health of changes in temperature and weather

Mediating process	Health outcome
Direct effects	
Exposure to thermal extremes	Changed rates of illness and death related to heat and cold
Changed frequency or intensity of other extreme weather events	Deaths, injuries, psychological disorders; damage to public health infrastructure
Indirect effects	
Disturbances of ecological systems:	
Effect on range and activity of vectors and infective parasites	Changes in geographical ranges and incidence of vector-borne disease
Changed local ecology of water- borne and food-borne infective agents	Changed incidence of diarrheal and other infectious diseases
Changed food productivity (especially crops) through changes in climate and associated pests and diseases	Malnutrition and hunger, and consequent impairment of child growth and development
Sea level rise with population displacement and damage to infrastructure	Increased risk of infectious disease, psychological disorders
Biological impact of air pollution changes (including pollens and spores)	Asthma and allergies; other acute and chronic respiratory disorders and deaths
Social, economic, and demographic dislocation through effects on economy, infrastructure, and resource supply	Wide range of public health consequences: mental health and nutritional impairment, infectious diseases, civil strife

^{*}Reprinted from McMichael and Haines,²² with permission from BMJ Publishing Group.

[Return to text]