



## The Marrakesh Meet (COP-22)

# CLIMATE CHANGES EVERYTHING

Leading international scientists have reported that climate change affects everything – tiny genes to entire ecosystems.

### WARMING WARNING

**82%** key ecological processes – genetic diversity and migration patterns — are being altered by global warming, a study in the journal Science reported

**94** Ecological processes that underpin the functioning of healthy ecosystems studied

**Land and oceans** are being affected, even though temperatures have risen just about 1°C over pre-industrial times from fossil fuel burning



### WHAT IS CHANGING

**Individual genes** are changing, significant shifts in species' physiology and physical features such as body size are being observed and species are moving to entirely new areas, according to Brett Scheffers, member of the International Union for Conservation of Nature Climate Change Specialist group

### NATURE WON'T NURTURE

**The study showed** that the more ecosystems change, the less likely they may be to guard us against the harshest effects of climate change

**Unhealthy forests** won't be able to sequester carbon

**Increasingly warm** oceans won't act as an effective buffer against temperature rise

**Climate-related floods,** sea-levels rise and cyclones will get worse

### NOW, IT'S DANGEROUS

**These changes** will affect humans by causing disease outbreaks, inconsistent crop yields and threatening food security, the researchers said

**People depend** on healthy ecosystems for food and clean water

**The researchers** also pointed out the changes they are seeing now were earlier not expected for decades

