



**“Salute e cambiamenti climatici: la più seria minaccia per la salute del 21esimo secolo: una prospettiva globale”**

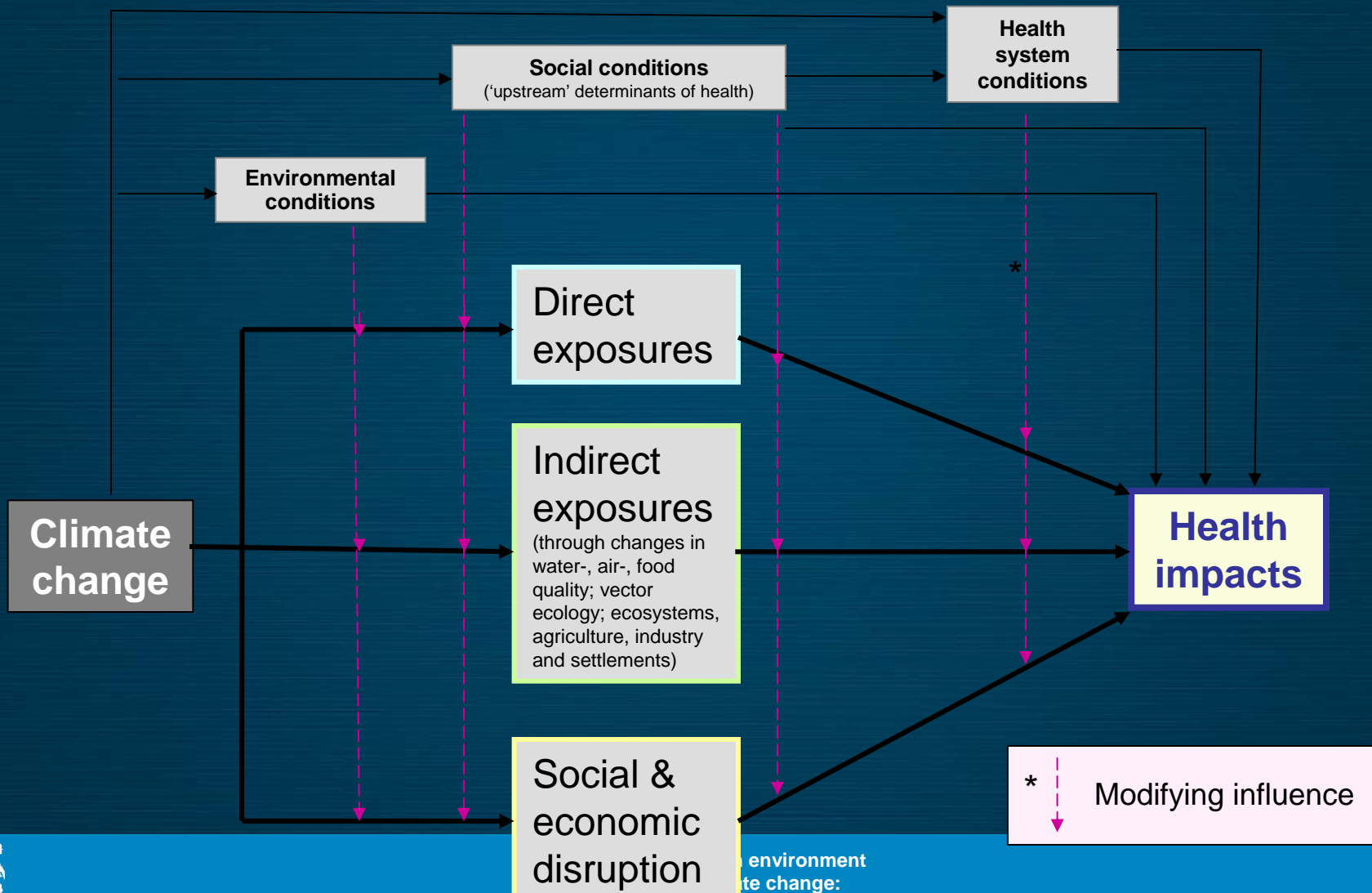
**Dr Bettina Menne**  
**WHO Regional Office for Europe**



Protecting health in an environment  
challenged by climate change:  
European Regional Framework for Action



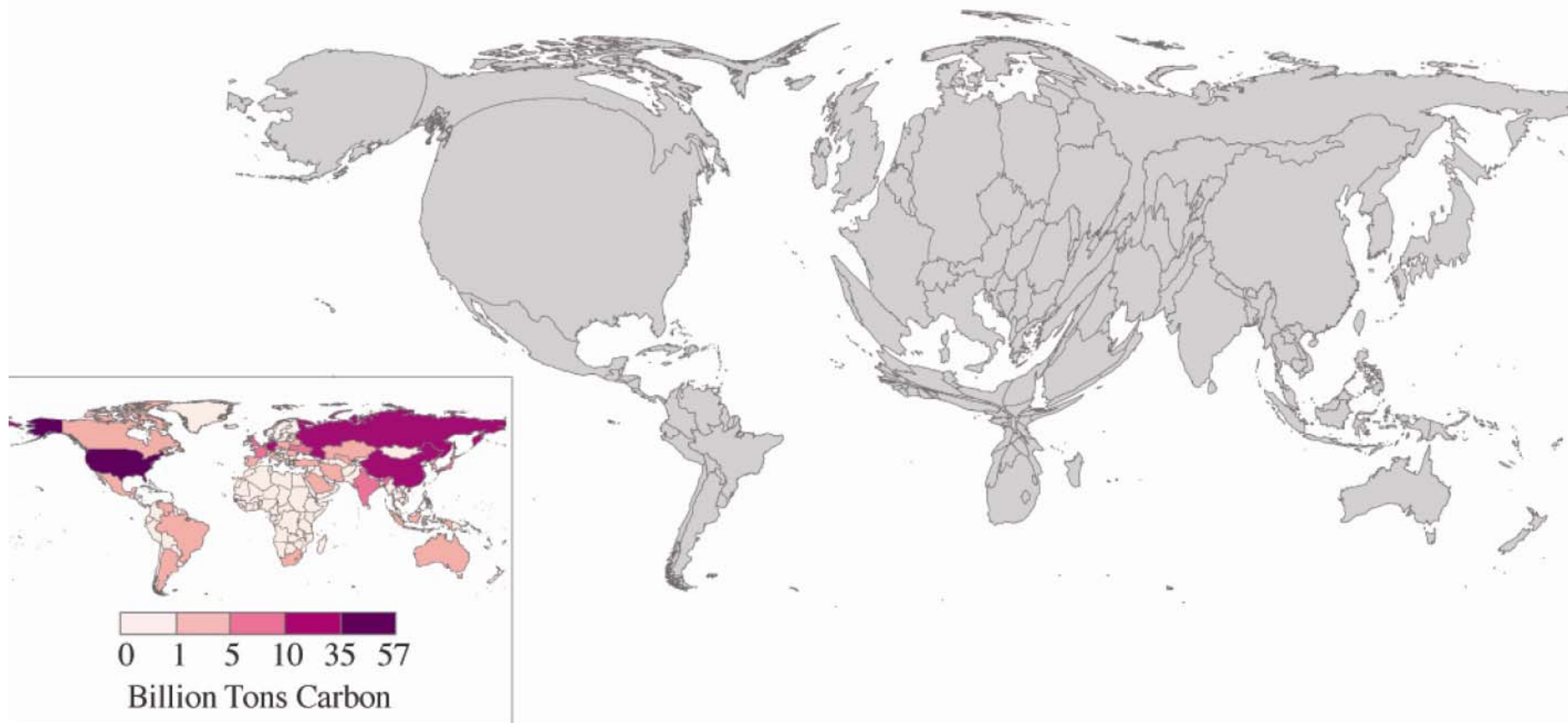
# Diagramma schematico degli effetti diretti ed indiretti



# La direzione la grandezza del cambiamento aspettato per acuni effetti sulla salute

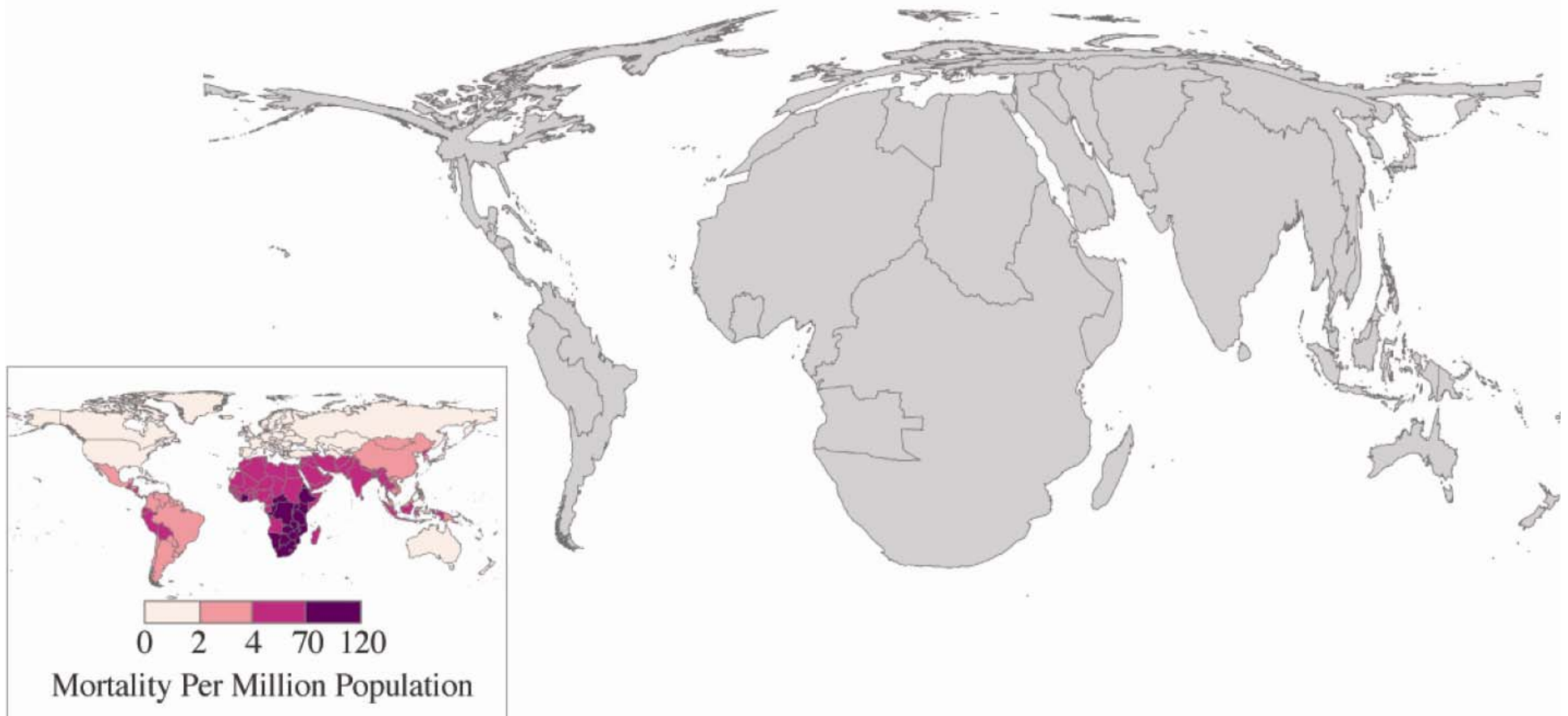
	Negative Impact	Positive Impact
<p><b>Very High Confidence</b>  <i>Malaria: Contraction and expansion, changes in transmission season</i></p>		
<p><b>High Confidence</b>  <i>Increase in malnutrition</i></p> <p><i>Increase in the number of people suffering from deaths, disease and injuries from extreme weather events</i></p> <p><i>Increase in the frequency of cardio-respiratory diseases from changes in air quality</i></p> <p><i>Change in the range of infectious disease vectors</i></p> <p><i>Reduction of cold-related deaths</i></p>	   	 
<p><b>Medium Confidence</b>  <i>Increase in the burden of diarrheal diseases</i></p>		

# MAPPA DEL PIANETA IN RELAZIONE ALLA DENSITÀ DELLE EMISSIONI DI GAS SERRA



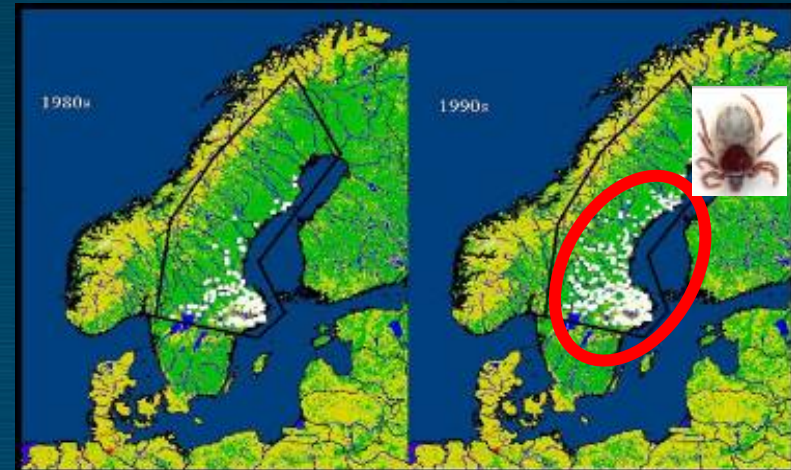
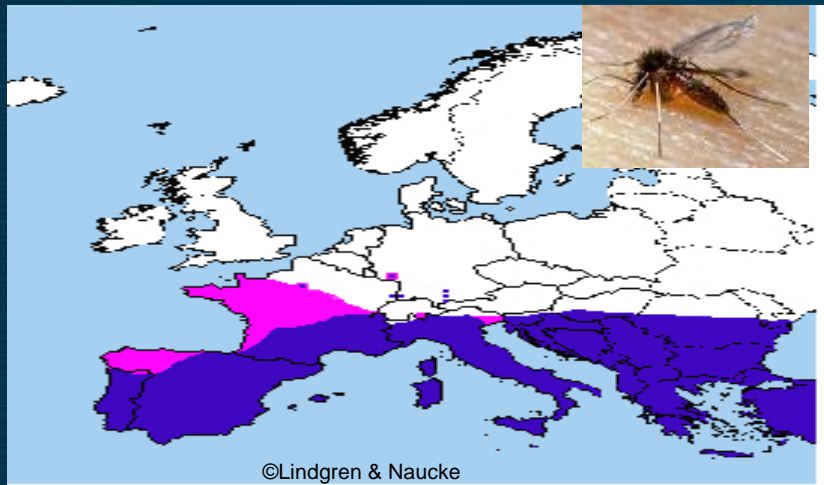
Countries scaled according to cumulative emission in carbon equivalent to 2002.  
Patz et al, Ecohealth, December 2007

# MAPPA DEL PIANETA IN RELAZIONE ALLA MORTALITÀ CORRELATA AI CAMBIAMENTI CLIMATICI

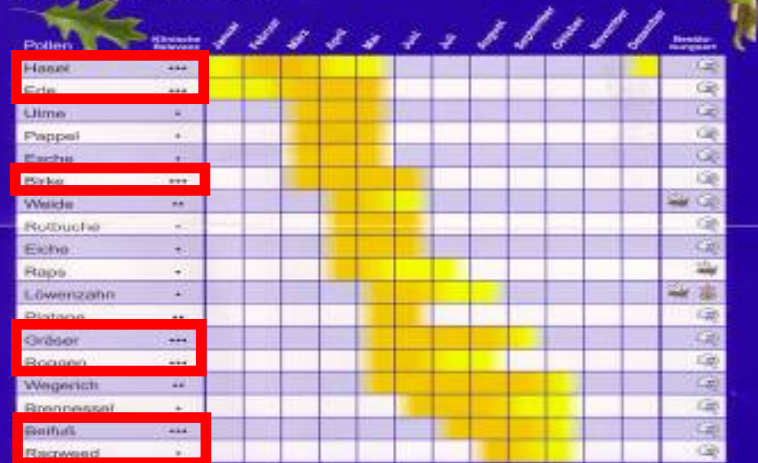


WHO regions scaled according to WHO estimates of mortality per million people in the year 2000, attributable to the climate change that occurred from 1970s to 2000. Patz et al, Ecohealth, December 2007

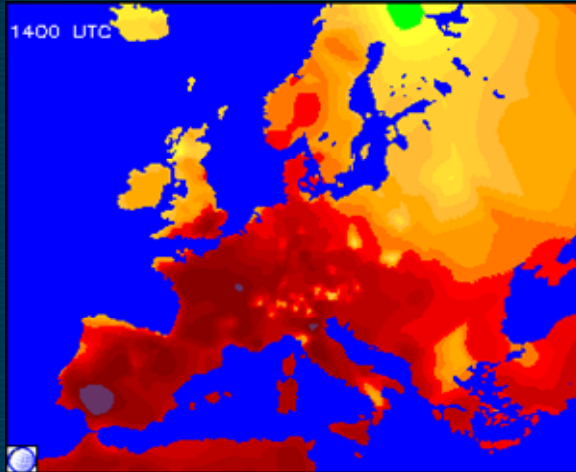
# Effetti osservati in Europa



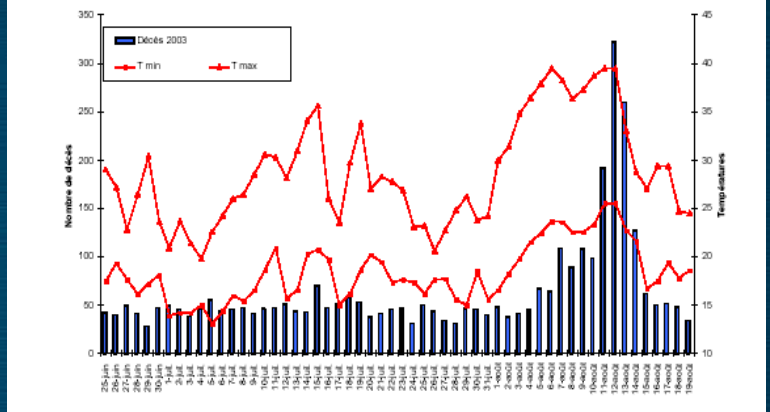
## Allergenkalender



# L'onda di calore: la sveglia



Graphique n°1 : Nombre de décès journaliers à Paris et températures minimales et maximales entre le 25 juin et le 19 août 2003



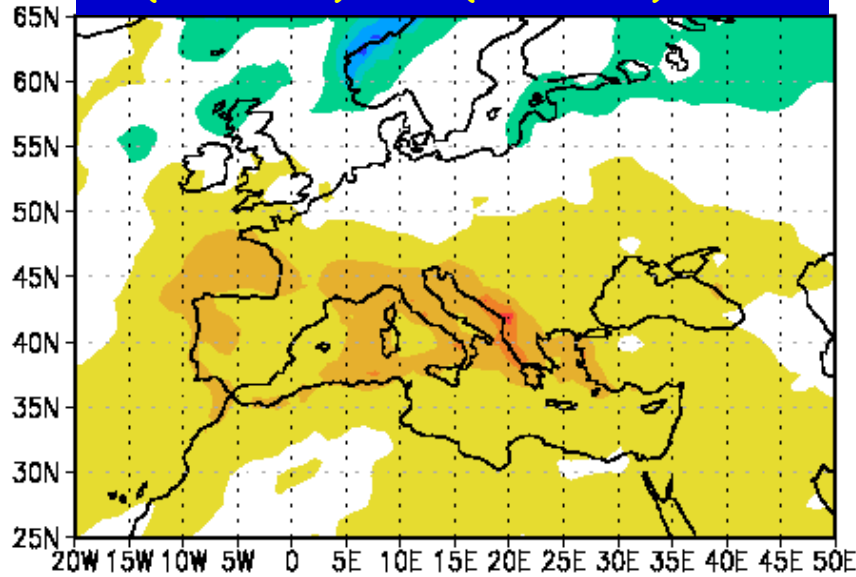
Paris Funeral Services (2003)



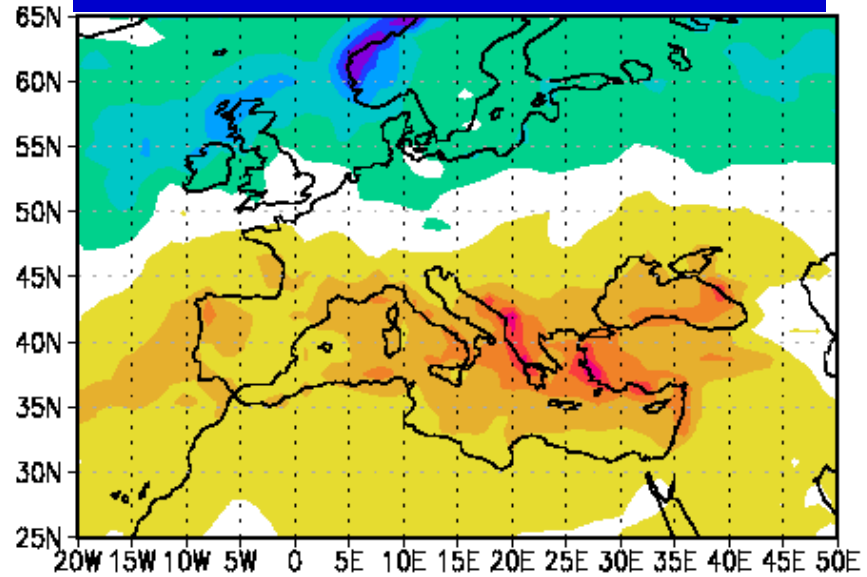
# SCENARIO: A2 - 20C precipitation



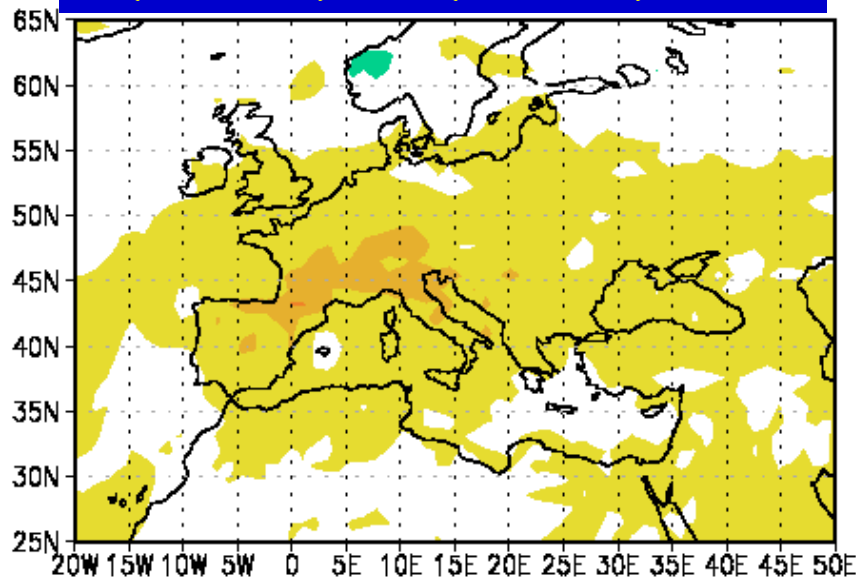
A2(2001-2050) - 20C(1951-2000) JFM



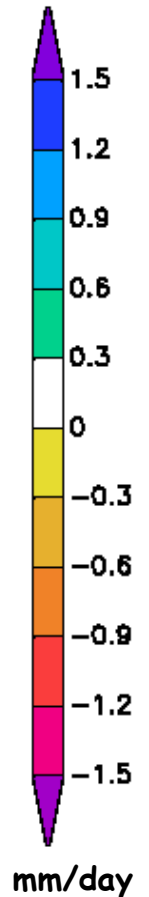
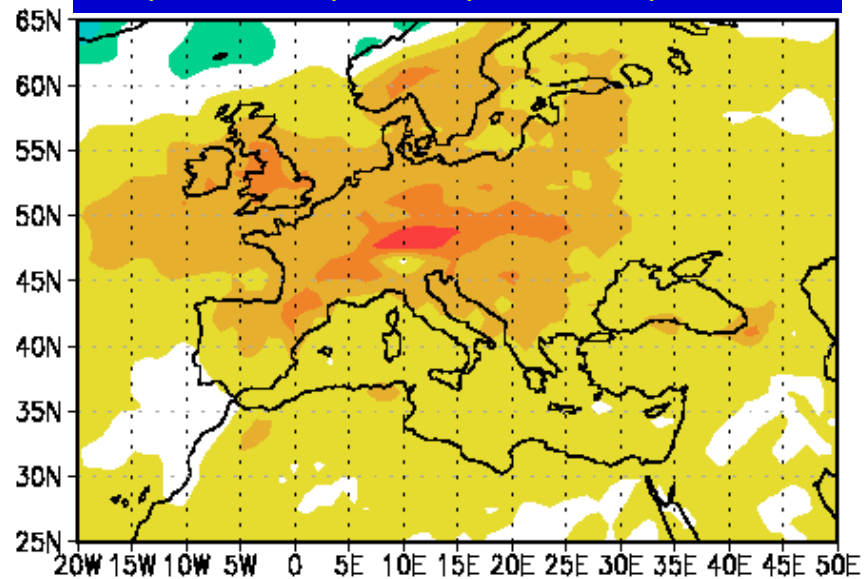
A2(2051-2100) - 20C(1951-2000) JFM



A2(2001-2050) - 20C(1951-2000) JAS



A2(2051-2100) - 20C(1951-2000) JAS





# Impatti anticipati

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- **Problemi alimentari in Asia centrale**
- **Aumento delle malattie trasmesse dal cibo**
- **Problemi di disponibilita di acqua in Asia, Mediterraneo ed altre zone**
- **Scioglimento del permafrost nelle zone subartiche;**
- **Aumento del inquinamento atmosferico se misure non vengono prese**

# Le malattie sensibili ai cambiamenti climatici

La dimensione globale:

- **Le catastrofi naturali uccidono piu' di 60,000 persone**
- **La sottonutrizione uccide 3.5 milioni persone**
- **La diarrea uccide 2.2 milioni persone**
- **La malaria uccide 900,000 persone**  
(WHO, 2003, 2008)



**Evitare  
l'ingestibile**

# Mitigazione e Adattamento

**Gestire  
l'inevitabile**

# La risposta del OMS



**Third Ministerial Conference on Environment and Health**



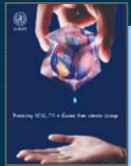
**Fourth Ministerial Conference on Environment and Health (extreme events and energy)**



**World Health Day 2007: focus on health security**



**Nobel Peace Prize to the IPCC**



**World Health Day 2008: “Protecting health in Europe from climate change”**



**European Framework for Action**





**Margaret Chan, DG, OMS**

"XXII Forum on Global Issues"  
Berlino, 18 Marzo 2009

***Up to now, the polar bear has been the poster for climate change. We need to use every politically correct and scientifically sound evidence to convince the world that humanity really is the most important species endangered by climate change.***

# Accordo quadro di azioni in Europa



## Obiettivo

- Protezione della salute
- Promozione dell'uguaglianza
- Dare ambienti sani

# Azioni

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- **Aumentare la consapevolezza**
- **Assicurare che le politiche di adattamento e di mitigazione includono la salute**
- **Rinforzare i sistemi sanitari**
- **Aumentare il contributo del settore sanitario alla riduzione dei gas serra**
- **Di condividere i risultati**

# Per chi?

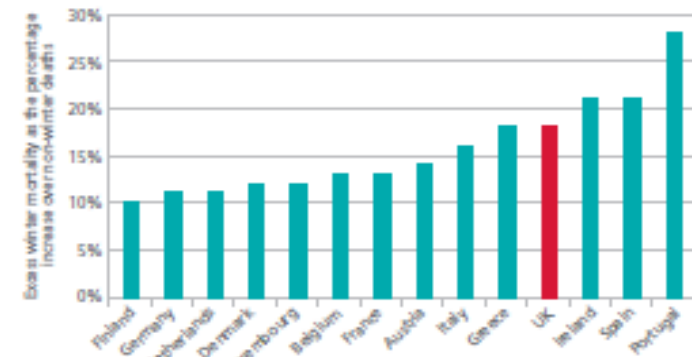




# Anticipatory

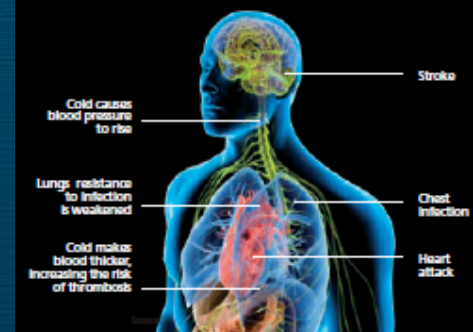


Figure 2: Excess winter mortality by country



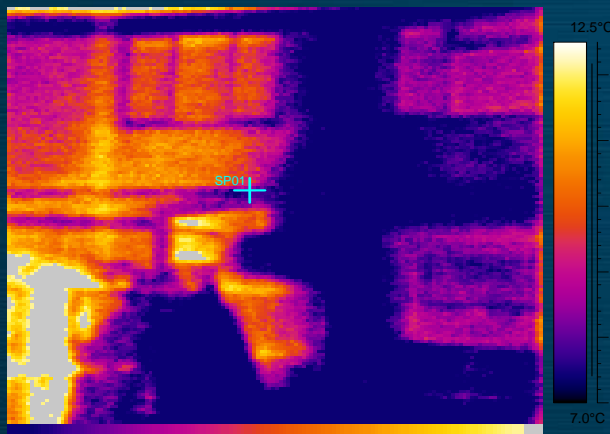
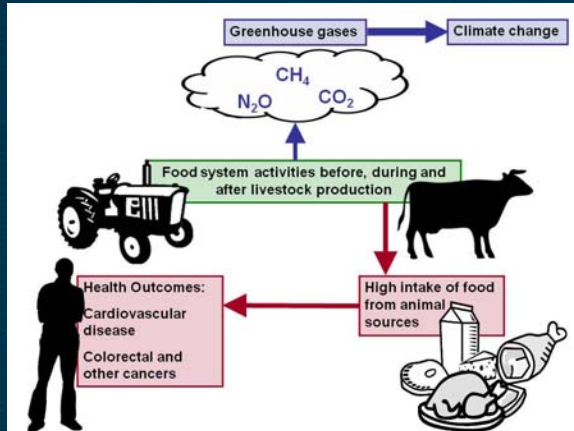
Source: Healy JD. Excess winter mortality in Europe: a cross country analysis identifying key risk factors. *Journal of Epidemiology and Community Health* 2002; 57(10): 784-9

Box 1: Health impacts of cold weather



# Guidato dai risultati scientifici

- Impact assessment results;
- Local regional national effective healthy adaptation studies and pilots;
- Examples of co-benefits of CO<sub>2</sub> reduction for health from:
  - energy-efficiency and renewable energy;
  - safe transport, encouraging physical activity and social contact;
  - improved outdoor and indoor air quality from CO<sub>2</sub> reduction measures in industry waste etc;
  - Changes in carbon-intensive food choices and production practices.



# Orientato verso soluzioni

## Improve and maintain:

- early warning and action plans;
- rapid response mechanisms – early detection;
- integrated disease surveillance and monitoring, and control of communicable diseases;
- Access to care
- training to deal with unfamiliar medical conditions;
- climate-resilient infrastructure;
- Examples of healthy lifestyles.

**You can make it!**



# Guidato dal esempio

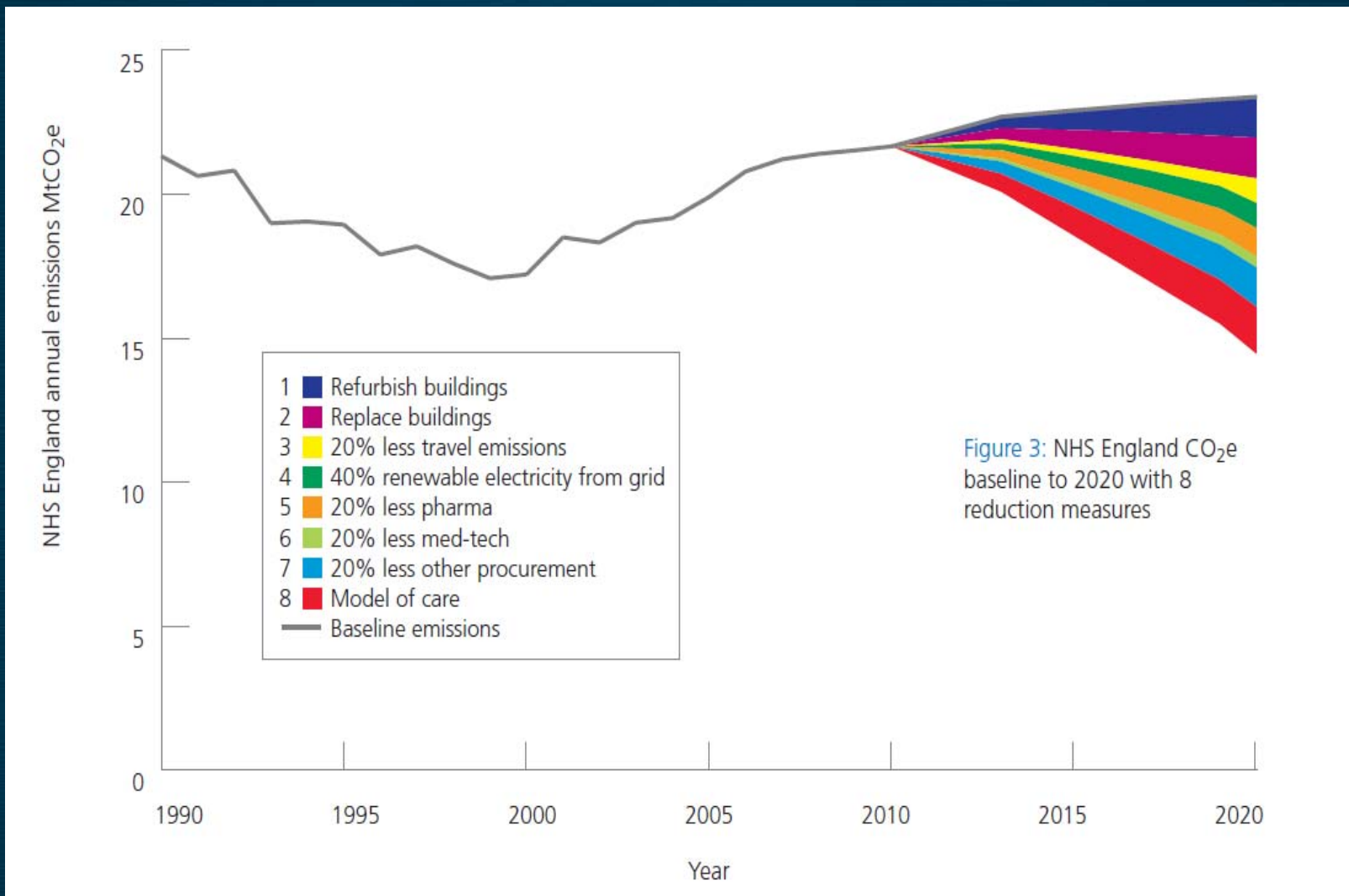


Figure 3: NHS England CO<sub>2</sub>e baseline to 2020 with 8 reduction measures

# Conclusioni – Tre argomenti chiave

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Tre argomenti chiave:

1. I cambiamenti climatici hanno conseguenze negative sulla salute umana
2. L'impatto dei cambiamenti climatici sulla salute si percepisce in maniera disuguale: una risposta efficace richiede un'azione globale
3. La riduzione delle emissioni dei gas serra può portare beneficio alla salute umana

*Questi sono i tre messaggi/argomenti chiave che l'OMS presenterà e discuterà nell'ambito della conferenza delle Nazioni Unite sui cambiamenti climatici che si svolgerà a Copenhagen il prossimo Dicembre 2009.*





Dutch Cows, after adaptation



# Thank you



Protecting health in an environment  
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