

Background

- Climate is changed mainly in response to numerous human activities that transfer gases into the atmosphere resulting in aggravation of the nature greenhouse effects.
- Three independent factors can determine the scale of human effects on the environment:
 1. Consumption per capita,
 2. The size of human population
 3. The technologies used to produce and consume resources.
- Science has confirmed that global climate changes produce environmental changes that are disrupting Earth's life-supporting infrastructure and posing risks to human well-being and health.

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Vulnerability of Climate Change: Malnutrition

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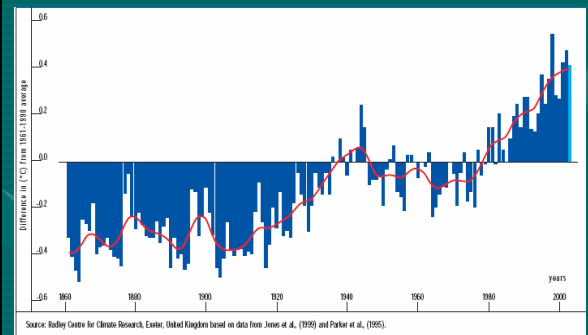
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- Global climatic changes alter the equilibrium of many ecosystems and the distribution of species they support, that may affects the distribution and severity of human diseases.
- These changes can arise through both:
 - **Direct effects**, i.e. disasters and alterations in the geographic areas able to support disease vectors.
 - **Indirect effects**, i.e. changes in human migration patterns and alterations in the essential requirements for life.

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Global mean temperature

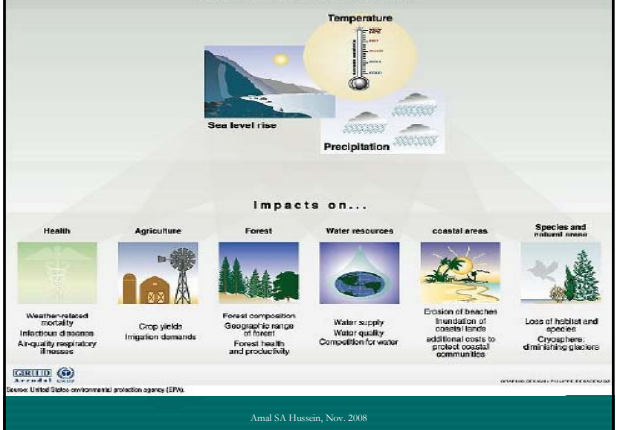


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Globally, comprehensive studies with detailed estimations and correlations between climate changes and human health **are still lack**.

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Potential climate changes impact



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Climate Change & Malnutrition

- A more likely scenario for the early 21st century is widespread famine after crop failures due to climate changes produced by the greenhouse effect.
- Malnutrition remains one of the largest health crises worldwide, and approximately 800 million people are currently undernourished (WHO, 2002).
- Global warming and changes in rainfall patterns will affect water resources and food production capacity.
- Droughts and other climate extremes have also direct impacts on food crops, and can influence food supply indirectly by altering the ecology of plant pathogens.

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Therefore,

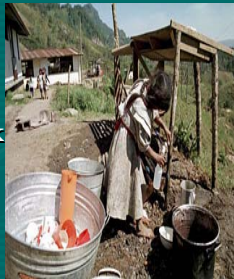
It is important to enhance capacity for early detection of health impacts of climate change.

This can only be achieved by:

- Supporting researches for identification of vulnerable groups,
 - Monitoring climatic changes, and
 - Assessing activities for adaptation.

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- Water scarcity encourages people to transport water long distances and store supplies in their homes.
- This can increase the risk of household water contamination, and causing diarrhea.



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Role of Disasters



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- More variable rainfall patterns are likely to compromise the supply of fresh water.
- **Globally**, water scarcity already affects four out of every 10 people.
- A lack of water and poor water quality can compromise hygiene and health.
- This **increases the risk of diarrhea**, which kills approximately 1.8 million people every year, as well as trachoma (an eye infection that can lead to blindness) and other illnesses.



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- **Rising sea levels** - another outcome of global warming - **increase the risk of coastal flooding**, and could cause **population displacement**.
- More than half of the world's population now lives within 60 kilometres of shorelines.
- **Nile delta** in Egypt is one of the most vulnerable regions.
- **Floods** can directly cause **injury and death**, **increase risks of infection from water and vector-borne diseases**, and **damage of the agricultures**.
- **Population displacement** could increase tensions and potentially the risks of conflict.



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- **Malnutrition** causes millions of deaths each year, **from both**:
- **Lack of sufficient nutrients** to sustain life and
- Resulting vulnerability to infectious diseases such as **malaria, diarrhea, and respiratory illnesses.**
- **Increasing temperatures** on the planet and more variable rainfalls are expected to **reduce crop yields** in many tropical developing regions, where food security is already a problem.
- **Unless adaptive measures are taken, climate change is projected to approximately double by the 2050s the percentage of its population at risk of hunger and associated health effects.**



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- Climatic conditions affect **diseases transmitted through water, and via vectors** such as mosquitoes.
- Climate-sensitive diseases are among the largest global killers.
- **Globally in 2002, Diarrhea, Malaria and Protein-energy malnutrition (PEM)** alone caused more than 3 million deaths with over one third of these deaths occurring in Africa.



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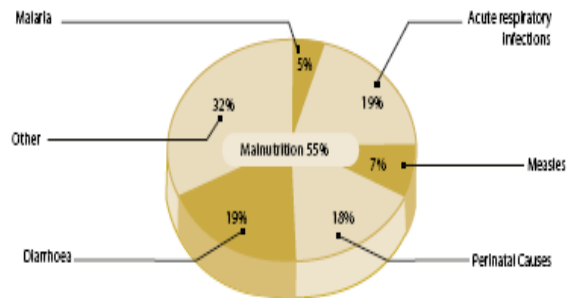
EGYPT



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Malnutrition is the leading killer of children

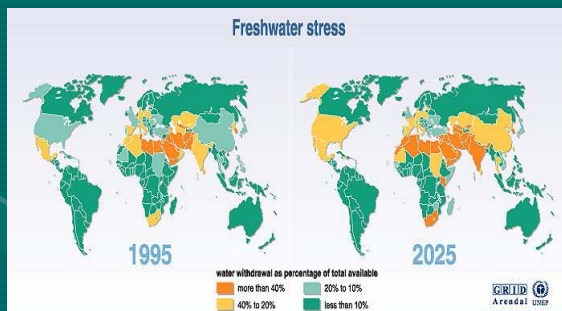
website: www.searo.who.int/
World Health Day 2008



*Malnutrition affects 54% of all children less than 5 years of age, and it makes them vulnerable to acute respiratory infections, diarrhoea, malaria and measles.

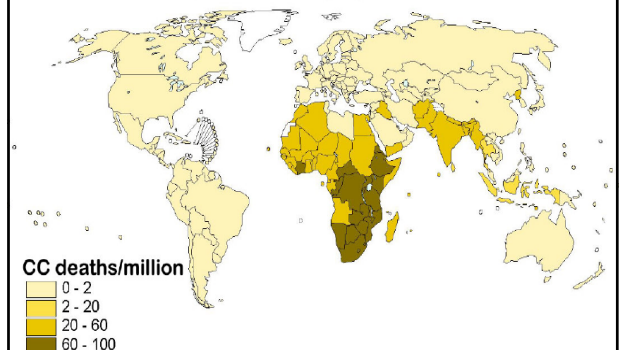
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The demand for water in Egypt



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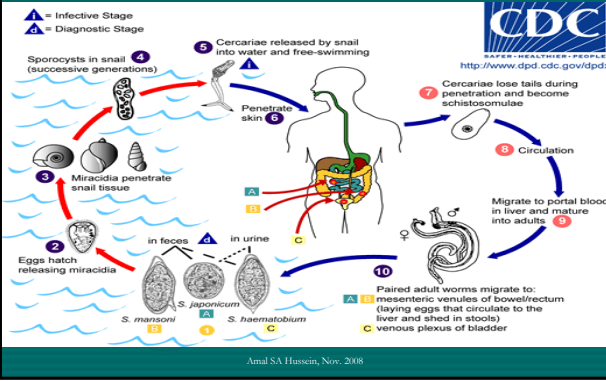
Deaths from climate change



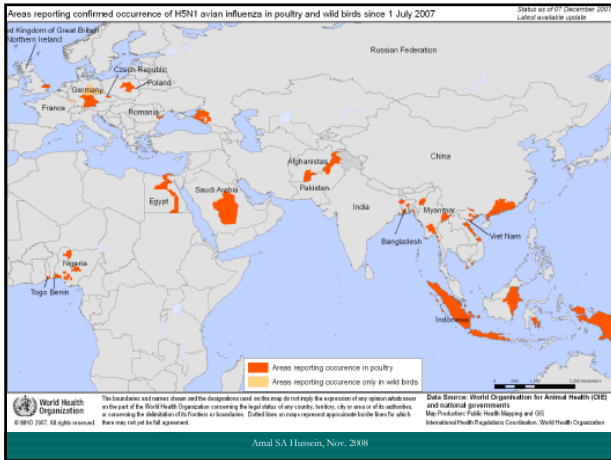
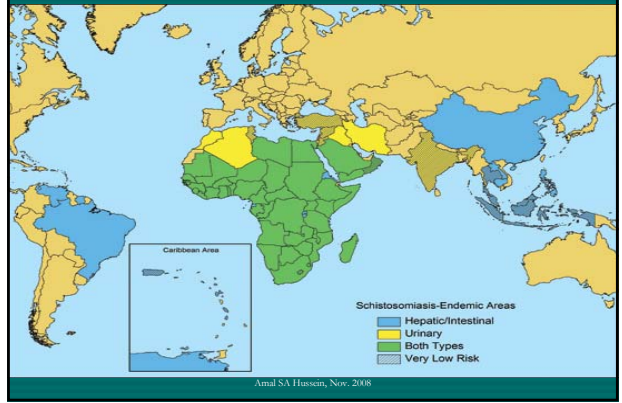
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Climate Change impact on Snails

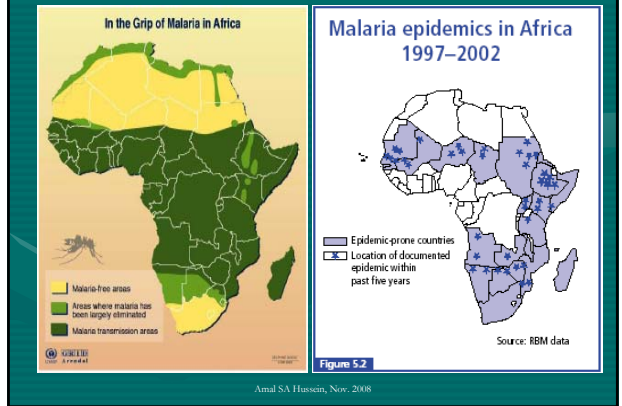
(the intermediate host)



Schistosomiasis

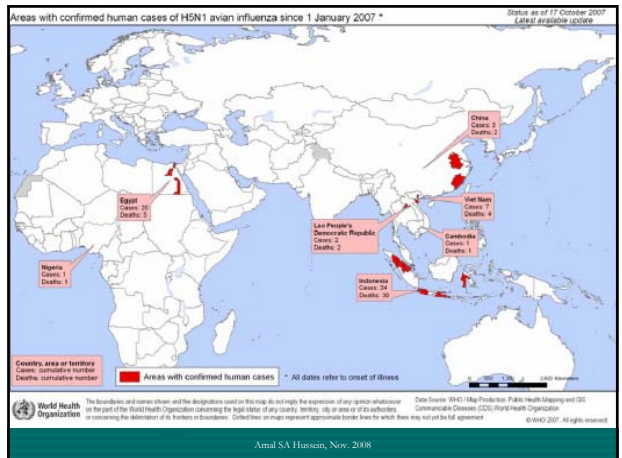


Malaria



In Egypt

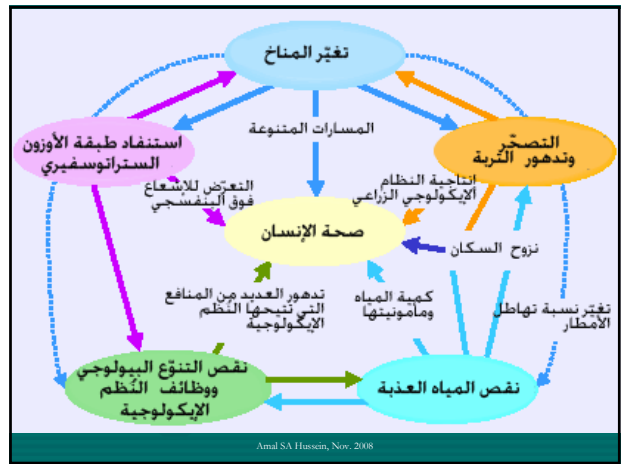
- In Egypt from the recorded data of EMRO and the data of EDHS, the percentages of child with underweight, whether mild, moderate or severe, were slightly declined during the last years
- According to the data of UNICEF, the percentages of children with underweight, stunting (height for age), and wasting (weight for age) were also slightly decreases.



The Golden Rule

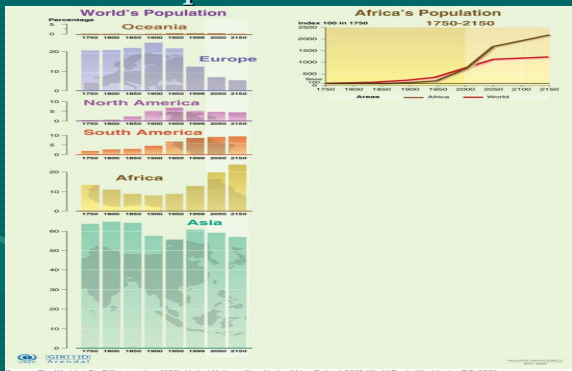
Adaptation

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Population Growth



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Steps to reduce greenhouse gas emissions or lessen the health impacts of climate change



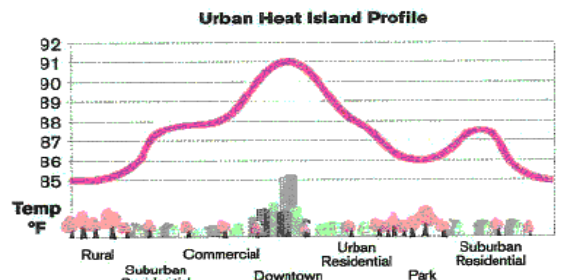
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Steps to reduce greenhouse gas emissions or lessen the health impacts of climate change



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Steps to reduce greenhouse gas emissions or lessen the health impacts of climate change



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Thanks for You



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Steps to reduce greenhouse gas emissions or lessen the health impacts of climate change



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