

# Science and the Environment (1900-Present)

**Key:**

5 WHAP THEMES-

Environmental-



Social-



Cultural-



Economic-



Political-



Cause-



Effect-



As the world continues to advance, **science, technology and the ideas of the world, continue to advance as well.** These new changes have resulted in **demographic shifts**, which have changed the way humans interact with the environment and with each other.

New **scientific ideas** were also introduced, challenging the previously "correct" ideologies of the world, such as:



- **The Big Bang Theory**- states that the universe was created by explosion of immeasurably small compressed matter, and is still occurring, which means that the universe is still expanding.

New **technologies**, like air travel, and the internet have provided us with **efficient modes of communication and transportation** that essentially eliminate the issue of geographic distance.



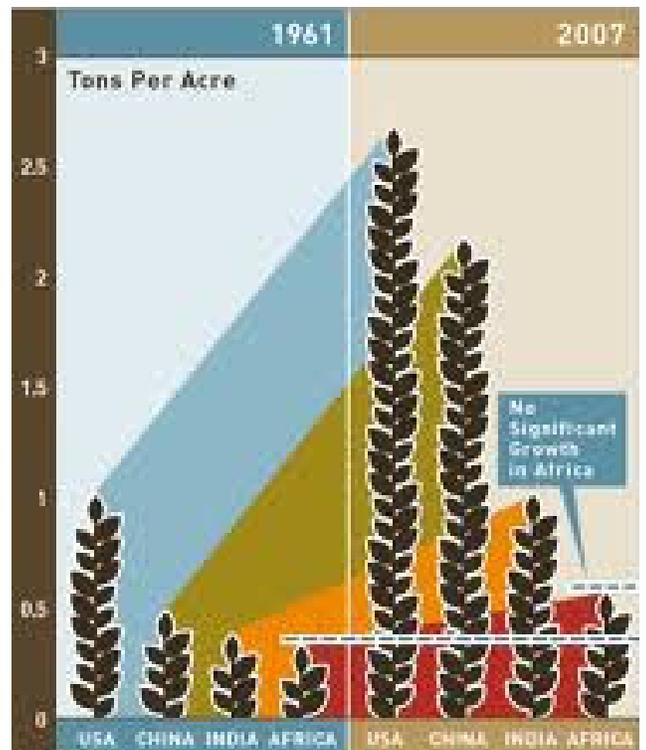
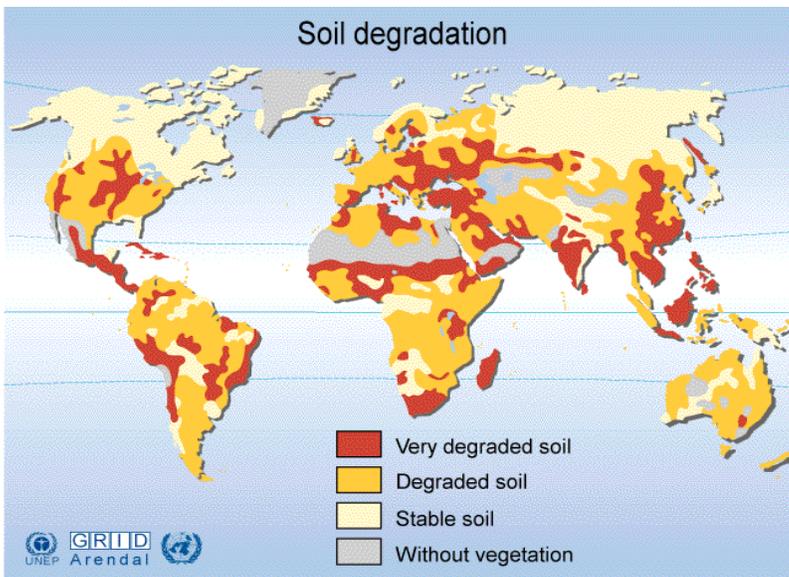
**Improved technology (tanks, airplanes, and atomic bombs)** also gave way to improved military technology that came with new tactics like **trench warfare (defensive fighting style used in WWI)** which led to increased hostility between rival states (**ex: Cuban missile crisis, nuclear arms race between US and USSR**) and a more dangerous and violent type of warfare that resulted in increased levels of wartime casualties. (**ex: Atomic bomb on Hiroshima**)



**THE GREEN REVOLUTION-** **the result of advanced technology and the need to feed the world's growing population**, greatly increased crop production, introduced fertilizers,



pesticides, and genetically engineered high-yield crop varieties to the environment, which would essentially solve all the world hunger problems, but would also cause extreme environmental degradation.



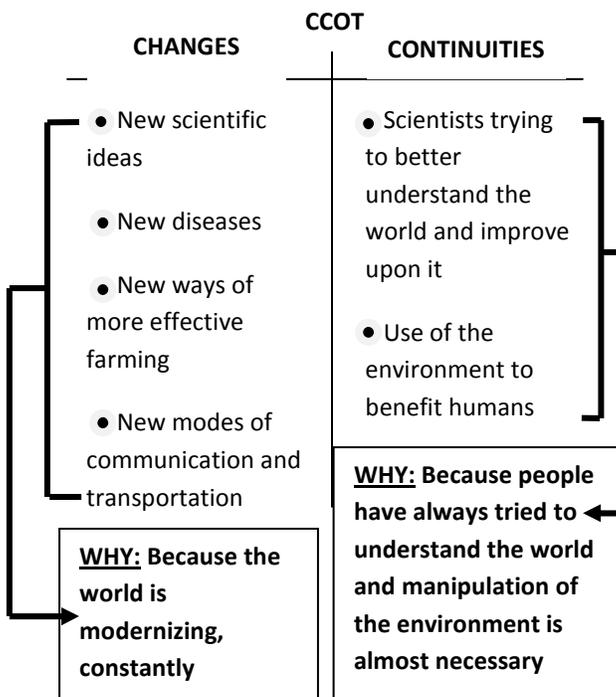
**CHART 4:** Africa missed out on the Green Revolution.

**Medical innovations, resulting from advances in technology,** increased the ability of humans to survive. Such as:

- **The polio vaccine-** saved countless lives and ended the crippling paralyzing effect that came with the polio virus.

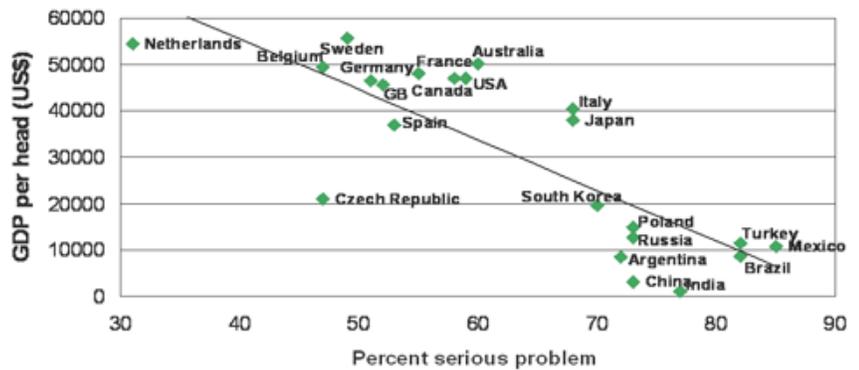
It was great medical accomplishment of the World Health Organization (WHO), and showed how advanced medicine was becoming.

**Advances in technology including the use of oil and nuclear power,** increased productivity and the production of material goods, and the consequence of greenhouse gases and other pollutants being released into the atmosphere was global warming. **As the global population skyrocketed,** humans began to interact with the environment differently, abusing it rather than gently using it. As humans discovered that the world's natural resources were valuable, they began to exploit and compete over the resources more intensely than they ever had before. Pollution threatens the world's supply of water and clean air, and deforestation and desertification have become a common human impact on the environment. As a result of species losing their habitats to our destructive behavior, rates of extinction of animals have increased greatly.



### As GDP rises, environmental concern falls

How serious a problem is the environment in ... ?



Ipsos MORI  
Base: 11,722 Online consumer citizens, November 2008

GDP from IMF 2008

#### Demographic shifts:

Diseases associated with poverty continued to exist, such as:

- **Malaria-** it's a relatively easy disease to prevent/cure with the proper resources; however the nations that are impacted by it the most are so undeveloped that they cannot afford to cure malaria. Therefore, malaria has become an indicator of poverty. (Ex: some African nations)



Other diseases arose in the form of epidemics such as:

- **The 1918 influenza pandemic-** most severe influenza outbreak of the 20<sup>th</sup> century, dramatic population decrease, the pandemic left approx. 25 million people dead.



In addition, **modern lifestyles, most commonly associated with a higher life expectancy** resulted in completely new diseases such as:

- **Alzheimer's disease-** directly associated with people living longer, the brain just starts to deteriorate from old age



**Modern science** also gave way to newer and more effective forms of birth control which empowered women and gave them greater control over their family size and their fertility. This indicated that the modern day women were not living in an extremely patriarchal society.

