



State of the World Summit 2020

Energy

*Your team has been assigned to report on the state of the world topic above. Use the facts below to create a slide show to share with the class. **The purpose of this assignment is only to present the current state of the oceans.** Causes and solutions will be discussed and studied in class. If you like you may use more information from the web link provided. Use photographs in your slide show.*

Current facts:

- Approximately 80% of the energy used on earth for currently comes from non-renewable sources: oil, natural gas, coal, and nuclear.
- Oil is used to create fuels for transportation (cars, planes, boats, trains, etc.), coal is used to generate electricity, natural gas is used for both electricity and transportation, nuclear is used to generate electricity.
- Non renewable sources do not replenish themselves; there is one amount on the world and when they are gone they are gone forever.
- “Peak oil”, the point at which the rate of extraction cannot meet rate of consumption is expected to occur within 20 years. Many believe it will be sooner.
- The use of fossil fuels (coal, natural gas, and oil/petroleum) release vast amounts of pollutants into global ecosystems, excess carbon dioxide, mercury, sulphur dioxide, particulate matter, and more. These pollutants are responsible for significant degradation of ecosystems, quality of food stocks and human health.

Link to further resources:

<http://www.bbc.com/future/story/20170313-the-biggest-energy-challenges-facing-humanity>



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Agriculture

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Current facts:

- Most food is now produced by “industrial agriculture” applying industrial methods of mass production in raising chickens, meat, fish and growing vegetables.
- Excessive use of antibiotics in industrial meat farms is creating strains of bacteria that antibiotics cannot cure in humans.
- 1/3 of all cultivatable topsoil has been lost due to over cultivation of soil.
- Pesticide use has doubled over past decades with no rise in productivity as insects become resistant to the pesticides
- Use of synthetic fertilizers have created up to 18 vast “dead zones” in the ocean where the runoff empties from rivers into the ocean.
- Each piece of conventional food we eat travels roughly 2000 miles in its production, using vast amounts of polluting fossil fuels.

Links to further resources:

https://www.ucsusa.org/our-work/food-agriculture/our-failing-food-system/industrial-agriculture#.WoRU_4Pwa2w



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Climate/Atmosphere

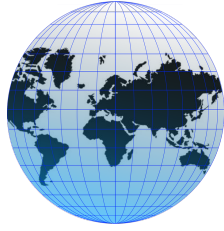
*Your team has been assigned to report on the state of the world's atmosphere and climate. Use the facts below to create a slide show to share with the class. **The purpose of this assignment is only to present the current state of the oceans.** Causes and solutions will be discussed and studied in class. If you like you may use more information from the web link provided. Use photographs in your slide show.*

Current facts:

- Carbon dioxide concentrations in the atmosphere are currently over 400 ppm (parts per million). The highest concentration of CO₂ over the past 600,000 years as measured from ice core samples is 280 ppm.
- Concentrations of CO₂ are expected to reach 500 ppm within 50 years at current rates of industrial activity. If this occurs scientists predict major disruption in the ability of current agricultural regions to produce food.
- Global average temperatures have increased nearly 1 degree F over the past century.
- Major flood events on all continents have increased in frequency and severity by 400% over the past 70 years.
- Carbon dioxide concentrations in the atmosphere are being absorbed by the ocean, lowering Ph (making it acidic) and inhibiting the ability of shellfish to form their shells (calcium carbonate).
- Sea levels rise is increasing to the point where some island nations need to abandon their lands.

Links to further resources:

<https://climate.nasa.gov/>



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Forests

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Current facts:

- 95% of all redwood forests in California have been permanently destroyed.
- Approximately 1/2 of all forested areas of the world have been removed since the dawn of human development.
- In the next 15 years, the demand for paper is expected to double
- China alone is clearing millions of acres of rainforest each year to clear farms to grow soybeans to feed the cattle to support the “progress” and “raising of lifestyle”, so that more people can eat meat.

Links to further resources:

<https://www.conserve-energy-future.com/various-deforestation-facts.php>



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Fresh Water

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Current facts:

- There exists a fixed amount of water on the planet
- Only a tiny fraction of the water on the earth is drinkable
- The Ogallala aquifer in the US accounts for 30% of all groundwater used for irrigation in US and irrigates 20% of all US cropland. It is currently being depleted and quality is deteriorating.
- A recent study reported in Nature magazine: within 2 decades the average supply of water per person globally will drop by 1/3.
- Half of all the inland waterways produce fish that the EPA warns against eating.

Links to further resources:

<https://www.worldwildlife.org/threats/water-scarcity>



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Oceans/Fisheries

*Your team has been assigned to report on the state of the world's oceans. Use the facts below to create a slide show to share with the class. **The purpose of this assignment is only to present the current state of the oceans.** Causes and solutions will be discussed and studied in class. If you like you may use more information from the web link provided. Use photographs in your slide show. It can be only a few slides long.*

Current facts:

- 10 year study reported in CNN states that 10% of big ocean fish remain—90% have disappeared over the last half century.
- Dept of Commerce: 28% of fish stocks are officially “overfished”, and another 19% is subject to over fishing.
- A moratorium on commercial salmon fishing was applied for two straight years when the fishery was at risk of “crashing”.
- 1/3 of all fish species are threatened with extinction.
- Top predatory fish are laced with mercury; young people are recommended not to eat these fish.
- Over 1 billion people worldwide depend on fish for their primary protein source.
- 20% of coral reefs have disappeared.
- There are massive garbage patches floating in the oceans, the “great pacific garbage patch” is twice the size of Texas and contains mostly plastic.
- Ocean acidity has risen 35 % in the last century.

Links to further resources:

https://www.globalcitizen.org/en/content/photos-plastic-pollution-caribbean-sea/?utm_source=facebook&utm_medium=social&utm_content=global&utm_campaign=general-content&linkId=46898985



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Global Human Population

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Current facts:

- Global population is currently 8 billion. Fifty years ago it was 3 billion. In roughly 35 years it is expected to reach 10 billion.
- In the 20th century global population increased 6 times over. By the year 2050 global population will have increased 10 times within 150 years.
- Since the beginning of humanity nearly 200,000 years ago, human population has never exceeded 1 billion until 1900.
- The “ecological footprint” of humanity is a land area measure of the amount of land needed to provide all resources and absorb all waste.
- Globally the world is in “overshoot”, meaning humanity uses 20% more resources and creates more waste than the earth can handle. This means it is “unsustainable” over time.

Links to further resources:

<http://www.pewresearch.org/fact-tank/2015/06/08/scientists-more-worried-than-public-about-worlds-growing-population/>



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Species/extinctions

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Current facts:

- Lion populations have fallen by nearly 90% in the past 20 years (BBC)
- 1/4 of all mammals face extinction (BBC, UN report)
- The natural “background” rate of species extinction is about one to five species per year; scientists estimate that we are now losing species 1,000 to 10,000 times the background rate, nearly 12 species go extinct every day.
- It is expected that 30%-50% of all species could be extinct by mid century if current trends continue.

Links to further resources:

http://www.biologicaldiversity.org/programs/biodiversity/elements_of_biodiversity/extinction_crisis/