

Team:  
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### Background

Academic Response to the issue of Global Warming

3rd semester of a continuing IPRO

### Problem

Though widely recognized as a real scientific issue that affects every person, the average person lacks a conversant knowledge of Global Warming. Television was the #1 source of information about the topic for audiences. \*

Poorly informed consumers will only contribute to the problem of mismanagement of resources, pollution, and Global Warming.

### Objectives

Conduct Public Education Seminars about Contributing factors and possible Solutions to Global Warming.

Establish Community outreach Contacts in the greater Chicagoland Area.

### Obstacles

Massive body of research and commentary concerning Global Warming.

Easy to take sides on Political/ Economic agendas.

\* Please see evaluation analysis

# IPRO 331: Global Warming and Community Outreach

Dr. Peter Lykos: Professor

Carol Debiak: Faculty Advisor

### Our Purpose

We intend to spread the facts about global warming to raise awareness as this issue becomes increasingly more important.

#### Global Warming

warming due to high carbon emissions. Continued use of fossil fuels will inevitably lead to environmental destruction, which in turn, would cause massive economic downfall, political instability, and global conflicts. Our only alternative is to actively pursue technological advancements in the production and use of bio-fuels. Bio-fuels, however, hold inherent flaws as an integral part in feeding the world, especially when it comes to using precious resources as fuels, not as foods. Thus, it is essential that we look at both sides of the bio-fuels debate. With efficient conversion of new generation of bio-fuels, is it a viable alternative that can supply the global energy needs?

#### Solar Power



The Sun is the single greatest source of physical energy at the disposal of mankind. This presentation outlines a few of the ways that solar energy is being captured, converted, and put to use in housing applications. Our goal is for the audience to walk away with a basic understanding of how solar energy can be captured and used, the benefits of using solar technology, and the challenges of implanting solar technologies.

#### Carbon Dioxide

Greenhouse gases consist of gases in the atmosphere that trap the infrared emissions that the earth tries to reflect back into space. Carbon Dioxide is the biggest contributor to this effect. While carbon dioxide is a naturally occurring gas, its concentration in the atmosphere is increased due to the burning of fossil fuels and the manufacturing of cement. The carbon dioxide produced from such productions not only adds to the atmospheric concentration but also becomes trapped in the oceans. Its effects have a vast spread from the inability of sea life to make shells to an increase in extreme weather conditions like hurricanes.



#### Polar Regions

The polar regions often serve as a barometer for Global Warming. It has been observed that these regions have melted significantly due to rising global temperatures. This has contributed to sea levels rising at a rapid rate. Rising sea levels could wipe out low lying lands, and destroy the habitats of the naturally occurring flora and fauna of those areas. These include places as diverse as Louisiana and Bangladesh, where 17 million people live less than one meter above sea level. The decline of glacial regions is also wiping out critical sources for water supply in several regions around the world, most notably the Himalayan polar caps. These serve as the sources of many important rivers, which are the primary water supplies for over 2.5 billion people. Recent estimates suggest these sources could dry up within 25 years. Additionally, as glaciers melt, the natural habitats for animals such as polar bears, walrus, foxes, and many others will be wiped out, endangering those species.



#### Fossil Fuels and Bio-fuels

The global demand for oil is rapidly increasing in the midst of expansion of such developing countries such as India and China. Currently, fossil fuels account for 85% of global consumption of natural resources and it is well known that



#### Wind Energy

Wind energy, along with solar power, is the most abundant and free power source known to man. It is a renewable, environmentally friendly power source that is available in every region of the globe. The technology to take advantage of this power is already in place, and all it needs is more people to become aware of its potential. The cost to build is cheap compared to current energy methods and there are no greenhouse gas emissions. There is little to no impact on wildlife, terrain, or our wallets. Once the price of wind is known, there is no chance of fuel price inflation, as the price of wind is fixed. In the long run, wind has the power to be one of the key constituents that will meet our energy needs without forcing us to change our way of life.



### OutReach Contacts

DePaul University  
 Whitney Young High School  
 Chicago Bee Library  
 "Science Chicago"

MacArthur Middle School  
 Schaumburg High School  
 Park Manor Grammar School

-12 Presentations Given  
 -Over 400 students, teachers, professionals reached

-Website for additional References: [www.iit.edu/~iitgreen](http://www.iit.edu/~iitgreen)

Team:  
 Nim Patel  
 Mark Reibel  
 Melissa Voss  
 Sara Wilde

### Methodology

- Phase 1: Intensive Research/ editing of information.
- Phase 2: Production
  - Edit graphics and presentation style.
  - Conduct community networking.
- Phase 3: Outreach efforts.
  - Finalize appointments
  - Tailor presentations to audiences
  - Make presentations.

### Results

- General Public
  - Audience Response indicated the presentations were informative and interesting.
  - Specifically, individuals commented on the negative effects of some bio fuels (which we cover in-depth) and wanted to learn more about them.
- Our Team
  - More Well-informed
  - More confident in presenting research
  - Better public speaks
  - More adept at networking
  - Deeper understanding of Ethical issues involved in Presenting research