What Do UWEC Students and Chippewa Valley Households Think About Global Warming?

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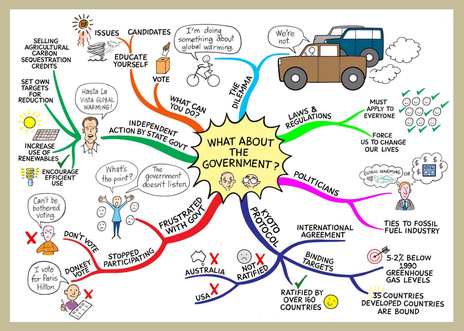
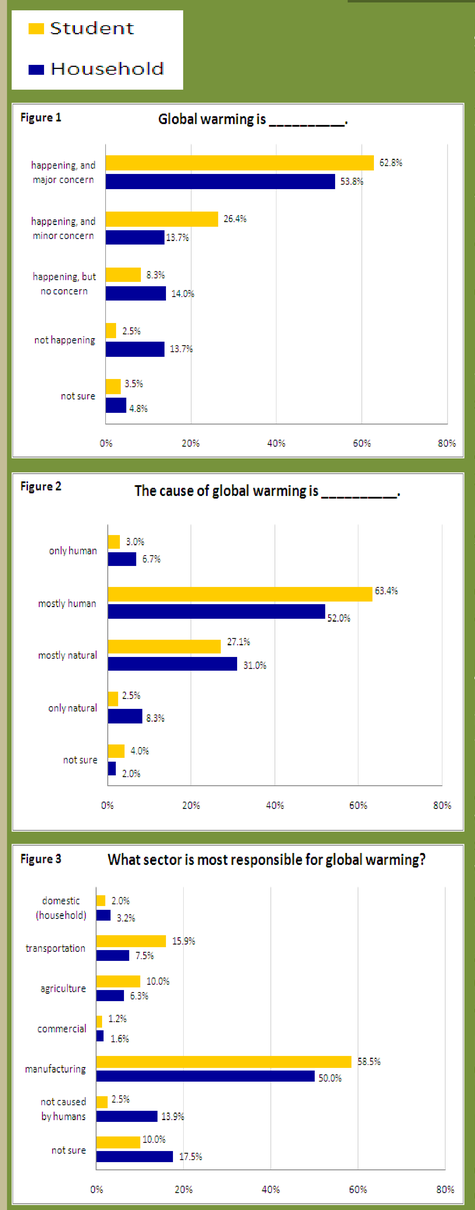


Abstract

General Information

Global warming has become a **hotly** debated topic with much discussion occurring worldwide. The US is currently considering passing legislation mandating reductions in carbon emissions possibly coupled with taxes and/or a cap and trade system. But how much do people really know and understand about global warming and global warming policy? To find out we conducted a survey to assess the perceptions and general understanding of global warming issues among UW-Eau Claire students and Chippewa Valley households. We first ask if global warming is happening and how much cause for concern we should have regarding this issue? The survey then examines what strategies may be effective in addressing global warming. Our results highlight the similarities and differences between students and households as well as the uncertainty among both groups.

Introduction



Method and Sample

We conducted internet surveys of Chippewa Valley households in December 2009 and January 2010. Participants were recruited through news releases in the television and print media as well as random postcard mailings.

A total of 307 households accessed the survey, but only 292 submitted complete responses. We also conducted paper and pencil surveys of 412 UW-Eau Claire economics, geography, and chemistry students over the same period.

The student sample was 54% female and 46% male, whereas the household sample was 45% female and 55% male. In terms of age, 93% of students were 18-24 years old compared to only 13% of household respondents. The remaining age distribution for households was 20% age 25-44, 50% age 45-64 and 17% over age 65.

Most households reported an income in the $40,000-$70,000 range while only 12% and 17% had earnings of less than $20,000 and over $100,000 respectively. Students were not asked about their income.

Is Global Warming Real & What Causes it?

Figure 1 shows that over half of all respondents feel global warming is happening and is cause for major concern, however students showed more concern than households. In contrast, almost 14% of households did not believe global warming was real compared to just over 2% of students. Lastly, less than 5% of all respondents were unsure suggesting that most everyone had an opinion on this issue.

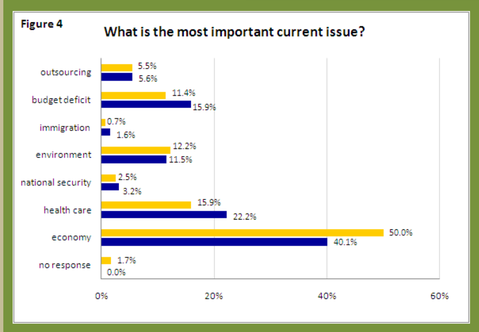
The remaining questions in the survey were only asked of those respondents who reported that global warming was happening (402 students and 252 households).

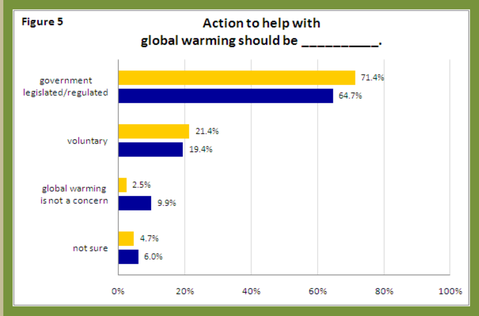
Figure 2 shows that most respondents in both groups believed that global warming is caused by a combination of human activity and natural phenomena. Once again, very few respondents reported being unsure suggesting that nearly everyone has some opinion regarding the causes of global warming.

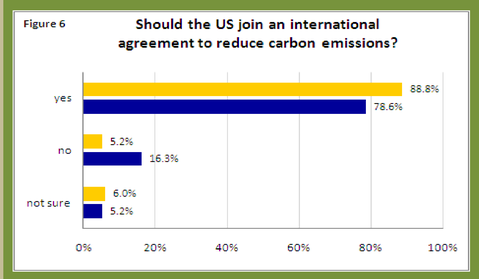
Further probing the causes of global warming, Figure 3 shows that both students and households placed most of the blame on the manufacturing sector. We also see that almost 14% of households did not feel that human activity was causing global warming compared to less than 3% of students who felt this way. In contrast to earlier questions asking if global warming was happening and what the general cause was, there was a higher degree of uncertainty regarding what sector was most responsible. In particular, 10% of students and just over 17% of households reported that they were not sure which sector was most responsible for causing global warming.

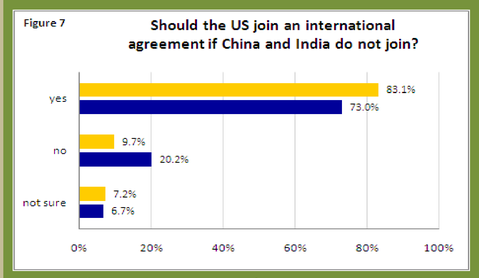
These results suggest that most people have an opinion regarding global warming and also feel that this issue is cause for at least some concern. However, it is important to note that a non-trivial number of respondents either did not believe that global warming was happening, or felt that there was not necessarily any cause to be concerned. We next examined how respondents perceived the role of government regarding global warming action.

Politics









The Role Of Government

To assess public opinion and general understanding of government policy we asked respondents what current issue they felt was the most important for the US government to focus on. Figure 4 shows that the majority of households and students identified the economy as the most vital current issue.

It is interesting that students expressed more concern over the economy compared to households, however households were more concerned with health care and the deficit In the context of this survey it is important to point out that only about 12% of households and students thought that the environment was the most important current issue.

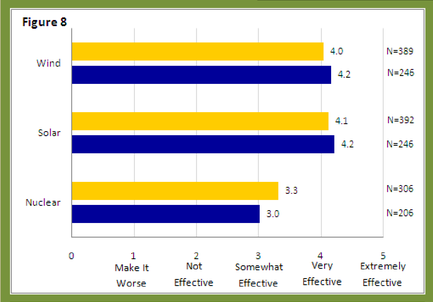
Figure 5 shows that about two-thirds of all respondents thought that action to address global warming should involve the government. In contrast, just 21% of students and 19% of households thought that action to address global warming should be voluntary.

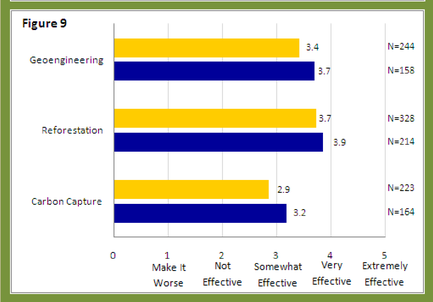
Figure 6 shows that both students and households overwhelmingly felt that the US should commit to joining an international agreement to reduce carbon emissions with students being more supportive than households (88.8% > 78.6%).

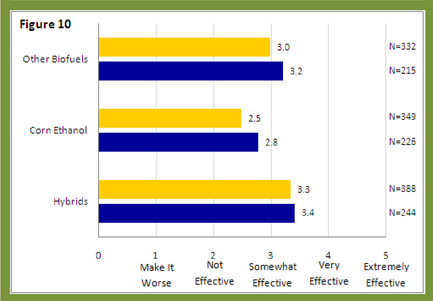
Similarly, Figure 7 shows that support for an international agreement remained very strong even if China and India did not also join. Just over 83% of students and 73% of households still favored such an agreement without China and India. Despite the overall strong support for the US to sign an international treaty, it is important to note that more than twice as many households as students were against it.

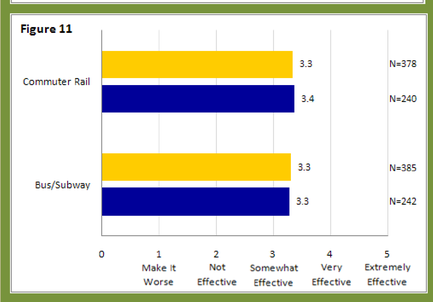
These results suggest that most people believed that action to address global warming should be led by the government and that the US should join an international agreement to reduce carbon emission whether or not China and India also join. We next asked respondents to rate the effectiveness of a variety of different alternative energy sources and policy strategies that could be used to mitigate global warming.

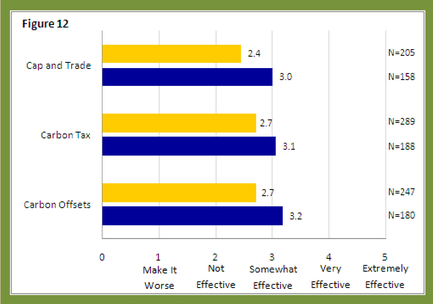
Strategies











Alternative Strategies/Policies

Figures 8-12 reflect the average rating for each alternative/strategy that respondents were asked about. Those who said they were unsure for any given item were omitted from the graph with the remaining sample listed in each case.

Wind, solar and nuclear have all been discussed as possible sources of alternative energy. Figure 8 shows that on average, households and students perceived wind and solar to be very effective alternatives, while nuclear energy was rated closer to somewhat effective.

Figure 9 shows that reforestation, geoengineering, and carbon capture were all perceived to be somewhat to very effective with carbon capture getting the lowest rating.

Figure 10 shows that respondents rated hybrid vehicles between somewhat and very effective in helping with global warming, while other biofuels were thought to be slightly less effective. In contrast, neither households or students were very optimistic regarding the effectiveness of corn ethanol.

Figure 11 shows nearly complete agreement as both groups rated commuter rail and bus/subway exactly in the middle between somewhat and very effective as a means of addressing global warming.

Figure 12 shows households rated carbon offsets, carbon taxes and cap and trade all as somewhat effective. In contrast, students were generally less supportive of these strategies. In particular, students seemed the most skeptical of a cap and trade system.

Overall, it appears that wind and solar were perceived to be the most effective sources of alternative energy with an average rating of very effective from both groups. In contrast, there seems to be some apprehension regarding the effectiveness of carbon taxes and a cap and trade system, especially among students.

It is also important to note that the sample sizes listed in the figures suggest a relatively high degree of uncertainty regarding many of these alternative strategies/policies. This is particularly true for geoengineering and carbon capture as well as carbon offsets, carbon taxes and a cap and trade system.

Discussion

Conclusion

Our survey results show that most people have an opinion regarding global warming, yet public opinions are somewhat divergent . Specifically, 59% believe global warming is a major concern, while 18% believe it is not happening or is not cause for concern. Of those respondents that believed global warming to be real, there was a general consensus that action to help with the problem should be led by the government. Moreover, the vast majority of these respondents also believe that the US should join an international agreement to reduce carbon emissions even if China and India do not also join. In terms of alternatives and policy strategies, wind and solar were perceived to be far more effective sources of alternative energy than either nuclear or corn ethanol and other biofuels. In contrast, there was some apprehension regarding the effectiveness of carbon taxes and a cap and trade system. It is important to note that a large number of respondents reported being unsure as to how effective some strategies and policies would be. In particular, respondents were most unsure about geoengineering, carbon capture, cap & trade, carbon offsets, and a carbon tax. Overall, respondents expressed reasonably strong opinions regarding global warming, but also seemed to have a general lack of understanding about what specific actions would best address the problem. In addition (although not shown in this poster), the vast majority of respondents reported little or no familiarity with the current US legislative proposals to address global warming. Therefore, our research continues on a second poster titled, *A Citizen's Guide to Useful Resources on Climate Change* in order to increase public awareness regarding both the science of global warming as well as policy strategies to mitigate global warming.

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