

The influence of climate change on globalization



WANG 1 INDEPENDENCE RESEARCH THE INFLUENCE of CLIMATE CHANGE on GLOBALIZATION I. INTRODUCTION What kind of impact and transition of globalization are affected by climate change in the future? Extreme weather is already be a fact of life for the future, and which will force us to face several problems, such as food and energy shortages, population distribution change and so on. Making the most detailed plan for any possibility is the best preparation. I would like to predict the trend of globalization for the future next 50 years. My prediction was made in the basis of climate change.

According to the two different weather projections “ Global Warming and Global Cooling”, I analyzed the impact and influence of globalization based on two issues: migration and resources. There were many experts and scholars made their studies and analysis on these issues. Therefore, first, I studied and analyzed each one and unified them, then made my own point of view and research. Finally, I formed the pattern for the future of globalization. II. BACKGROUND OF GLOBAL WARMING AND COOLING 1.

GLOBAL WARMING Global warming refers to the average temperature continued rising of the Earth’s tmosphere and oceans. Global temperature rising will cause sea level to rise and will change the pattern of rain, and it also might expand the subtropical deserts. Global Warming is expected to be the strongest in the Arctic area and the glaciers, permafrost and sea ice continuing melting. In addition, Global Warming will cause the extreme weather events happen frequently such as heat waves, droughts and heavy rainfall events. Furthermore, the risk of species extinctions and decreasing agricultural yields are thought of as the most serious consequences.

The influence level of Global Warming varies from region to region, some areas will suffer more severe effects than others. WANG 2 According to human historical record, global warming happened one time during the Middle Ages, which was been called “ Medieval Warm Period (MWP)”. The MWP was a time of warm climate in the North Atlantic region that may also has been relate to world, including in China, New Zealand, and other countries. That lasted from about 950 to 1250 AD. It was been followed by a cooler period in the North Atlantic, termed the “ Little Ice Age”.

Some refer to the event as Medieval Climatic Anomaly, as this term emphasized effects other than temperature were important. 2. GLOBAL COOLING Global Cooling is a term that was been described by scientist in 1970s. The definition of Global Cooling was quite different from the Ice Age that we know of. A DVD called “ Naked Science- Big Freeze”, published by National Geographic, said: “ Global Cooling was a conjecture. This hypothesis had mixed support in the scientific community, but gained temporary popular attention due to a combination of a slight downward trend of temperatures from the 1940s to the early 1970s.

Press reports did not accurately reflect the scientific understanding of ice age cycles. In contrast to the Global Cooling conjecture, most scientific opinion on climate change is that the Earth has not durably cooled, but Global Warming throughout the twentieth century. ” (2007) However, there are believable facts to prove Global Cooling will have a great chance to happen in the future. One of facts is that great amounts of fresh water, which was produced by glaciers melting due to Global Warming into the ocean, will slow down or shutdown “ Thermohaline Circulation (THC)”.

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It will make the warming current temporarily stop the transfer of warm water to the high altitude area, then it will cause the Ice Age or Little Ice Age to start. During human history, there was a period of cooling happened from 1300 to 1850 AD. This period was been called " Little Ice Age (LIA)". The term was been introduced by Francois E. Matthes in 1939. The LIA occurred after the MWP. While not a true Ice Age. It was been conventionally defined as a period extending from the16th to the 19th centuries. WANG 3 (Fagan 25) III. THE IMPACT 1. MIGRATION For the first time in history, you could actually lose countries off the face of the globe. It is security threat to the places where they (climate refugee) go, among other consequences," Stuart Beck, the permanent representative for Palau at the United Nations, tells The New York Times. As Mr. Beck said, in the future, we might face losing our own places where we were born, lived and had grown up. In fact, the tragedy has already happened. Tuvalu, an island country located in the Pacific Ocean, has faces coastal flooding and shoreline erosion such problems cause by global warming.

They will lose about 60 percent of territory within 50 years if the global temperature keeps rising up. The government sought help to relocate their residents in 2001. Until now, there is only one country, New Zealand, who promise to allow a opening limited number of persons to migrate per year. A whole country's people migrating to another place will bring many problems in economics, resources and culture. Before the perfect and detailing plan comes up, there are no countries willing to accept a large of number people move in their own place. It was just a beginning of the natural resist. How will be like for the future?

There will absolutely emerge more and more climate refugees. I will go through this issue further more in this section. 1-1. THE CONDITION OF MIGRATION FROM PAST TO FUTURE Throughout history people have moved under conditions that are not typically of their own choosing. Overcoming the difficulties of navigation technology of people started to explore the unknown lands. By war, colonization and occupation, people have expanded their country's space. Since that time, people have developed abilities to adapting, innovating and combining knowledge across cultural barriers when they settle down in new places.

WANG 4 Nowadays, apart from the obstacles are inherent in the national migration systems, people continue to migrate for many of the same reasons that have force moving throughout history: to seek new opportunities and escape economic and political distress. Many factors related to family, wages, security values and opportunities influence migration decisions. For this reason, the migration tide rises rapidly year by year. The number of international migrants is expected to double to reach over 405 million by the year 2050, according to the International Organization for Migration (IOM).

In its annual World Migration Report, IOM says the growing number of workers in developing countries will contribute to the steep rise in international migrants. Because of the decline of work opportunities and the standstill of economical flow, more and more people from developed countries yearn to move to developing countries for seeking better jobs and investment. The number of migrants in more developed regions increased by 33 million between 1990 and 2005, according to the 2006 database of United Nations (Goldin et al. 122-123). This fact also brings another problem <https://assignbuster.com/the-influence-of-climate-change-on-globalization/>

that the aging of the population in developed countries will intensify. Based on a forecast of the United Nations, by 2050, taking Europe for example, more than 26 percent will be elderly in Europe. However, in 1950, there were only about 8 percent of people who were over 65 (see figure 1). The outflow of younger generation is one of the reasons that aging population occur apart from the declining fertility rate (Goldin et al. 244-245). FIGURE 1 WANG 5 Figure1: Population distributions in European Union, 1950-2050. The horizontal scale is millions of persons by sex.

The charts were drawn with United Nations data. In the future, despite the factors above that drive people to migrants, there is one occasion would compels people have to move and that would cause more problems: climate change. A huge numbers of climate refugees will emerge. Most of people think it as a negative result of climate change. However, I think it might be a good chance to reduce the aging of population in the developed countries. 1-2. CLIMATE REFUGEES Climate refugees refers to people who become homeless because of the disasters that cause by climate anomaly.

The major reasons that cause the phenomenon of WANG 6 climate refugees are rapid ecological change and disruption such as droughts, desertification, sea level rise and the more frequent occurrence of extreme weather events such as typhoons, flooding and tornados. The Intergovernmental Panel on Climate Change (IPCC), an international science organization that produces assessment reports on climate change regularly, suggested that approximately 200 million environmental refugees would exist by 2050.

In this projection, the impacts of climate change, including coastal flooding, shoreline erosion and agriculture degradation are considered as major factors which contributes to the bulk of environmental refugees. Where to relocate these refugees? The case of Tuvalu, which I mentioned earlier, was a very good example to force people pay more attention to this issue and confer the best way to relocate climate refugees. In fact, there were so many future city plans that are inspired according to the possible climate change such as “ Floating City” in New Orleans of Unite State, “ Artificial Island” in Poland and “ Liypad City” in Belgium.

They are all designed for resisting serious weather condition and providing a pleasing living space for residents or refugees. The city plans I mentioned they all provide perfect living functions and concrete infrastructures. Some of them have well designed agricultural system that they hardly do not have to import any food and farm produce from other countries or other future cities. If our cities were to become this way that will be a big impact in globalization. Nevertheless, these city plans were just concepts that people idealize would perhaps happen on the Earth in the long-term future.

In the near future, we will need to devote a lot more effort on researching how to improve our current living conditions and to design living models that are more palpable for our current situations and resources. 2. RESOURCES WANG 7 2-1. FOOD In human history, climate condition which caused food decline had already happened many times. The period which went through climate anomaly was usually in the turmoil and even cause an empire disappeared. For instance, Ming Dynasty (1368-1644 A. D.), one of the great dynasties in ancient China, had come through the Little Ice Age (LIA).

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The people in the Ming dynasty suffered the coldest weather within 1000 years. They barely survived by importing cold resistance grains, but Ming still could not fight against the fate of the end before the LIA stopped at 1850 A. D. As for today, due to dramatic climate change and condition, global agricultural yield become more unstable more frequently. It not only affects the stable of economic status but also increasing the chance of social chaos. If we get to the stage that climate anomaly would severely affect our living conditions, it might not just be as simple as disappear of an empire.

Another staggering truth is that the food shortage has become more serious even if there is no climate change factor. According to a scientific group's projections, the research results, which were published online in 2005 with no climate change factor added in, showed that the number of under-fed individuals more than halves, from around 850 million in 2005 to less than 300 million in 2080. Such data been predicted was the result of population growth and over-cultivated. Such circumstance was apparent in developing areas such as Latin America and East Asia (see figure 2).

The increasing demand of food is reasonable for developing countries, therefore, the consumption keep rising up even though the demand already become slower in industrialized countries. Undoubtedly, once climate change is added in projection, the result will be far more terrible than the report displayed. FIGURE 2 WANG 8 Figure2: Trends in consumption of livestock products per person. (McMichael et al. 370. 9594) 2-2. ENERGY In the ancient world, people usually take energy needs from renewable sources including food, firewood, wind, water, livestock, and slaves, with only tiny amounts from coal and oil. After 18th century, industrial revolution and the invention

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of steam engines, the demand of fossil fuels rapid increased till now. Franklin Hadley Cocks note that " Now, at the beginning of the third millennium, the world's average annual energy consumption per person is about 100 times higher than it was 2000 years ago, when there were only perhaps 200 million people in the world. Presently, there are more than 6 billion people on the face of the Earth.

Over the last two millennia, world energy usage has risen by a factor of more than 3000 and has been increasing at a rate WANG 9 of around 2% per year. This 2% increase per year is all by itself 60 times more energy than the total annual energy consumption of the ancient world. " (5-6). Because of the growing of developing countries and the ignoring the limited energy consumption in the big industrial countries, the energy demand continues to rise up year by year. According to the latest report, HSBC published online in 2011, it shows that oil resources may run out by 2060.

As we know, the resources always become a fuse to cause a war. With international oil prices hovering around \$ 100 per barrel and the Arctic ice melting in an unprecedented speed, the United States, Russia and other national powers now covet the rich energy in Arctic. If global temperature keeps increasing, after 55 years, the Arctic Ice will completely disappear. At that point, a new type of war might commence shortly in a form similar to the Cold War. The great irony is that the burning of fossil fuels is a major culprit to cause the melting of Arctic ice.

Such factor, however, urge for mining more fossil fuels for the 21st century. Nevertheless, it will be a totally different scenario if the Earth turns to be

Global Cooling. The resources hidden under the Arctic Ice will not be able to reach and mine. Global freezing will force people expand more large sum of fuel on heating such as transportation and house-use. Therefore, people are in urgent need of substitute power resources. The best idea is to find or create a resource can totally replace fossil fuel such as oil, coal, petroleum and natural gas.

In fact, scientists have put a lot effort on research and development of new energy such as nuclear fusion, space solar power and artificial photosynthesis (Cocks part 3). These new technologies are still all in experimental stage, but I believe that will be a key point to save our world in the nearly future. IV. THE NEXT 50 YEARS In the future, Globalization is going to be more frequent and complicated base on the synthetic results of the studies above. I think climate change will force countries cooperate WANG 10 with each other, it is the only way to survive in global extreme weather conditions.

The number of migrant will rise up, everyone should prepare for moving momentarily, because we have no idea when and how the disaster would come up. Every country shares their own technology and resources to each other to fight against the extreme natural disasters and deliberate the best solution to save our hometowns. It will not be allowed for human beings to be selfish in the future world because only through cooperation we can collaboratively help each other to survive. At that point, perhaps, the world currency will be unified for convenience.

There will no longer be demarcation line between races, nationalities, religions, politics and gender. V. CONCLUSION Heidi Hammel, a senior research scientist, said: " It is very clear that global climate change is occurring on earth, but it is also been very clear that that has always happened on earth. We have always had a changing climate on earth. Most people talk about climate change as if it is something new. Climates always change. The question is, how are we going to adapt to climate change? " I totally agree with her point of view, and was the most struck and inspired by the question: how are we going to adapt to climate change?

The most important lesson we have to learn is how to bring down the fence between religions, nations, and politics, the desire to fight and other aspects that can cause conflict. We have to become a person who possess a heart with love, peace, toleration and mercy from now to the future. We must have a leader who possess these characteristics to lead us to get through such the massive era may happen in the future. If people all possess these qualities, such leader will show up naturally. My question is: are we ready to welcome the new leader? VI. REFERENCES A. Goldin, I. Cameron, G. , Balarajan, M.. Exceptional People: How Migration Shaped Our World and Will Define Our Future. New Jersey: Princeton University Press, 2010. WANG 11 N. pag. Print B. Fagan, Brian M. The Little Ice Age: How Climate Made History, 1300-1850. New York: Basic Books, 2001. N. pag. Print. C. Cocks, Franklin H. Energy Demand and Climate Change: Issues and Resolutions. Weinheim: Wiley-VCH, 2009. N. pag. Print. D. McMichael , Anthony J. , Powles, John W. , Butler , Colin D. , Uauy Ricardo. " Food, livestock production, energy, climate change, and health" The Lancet 370. 594 (2007): 1253-63. National Centre

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