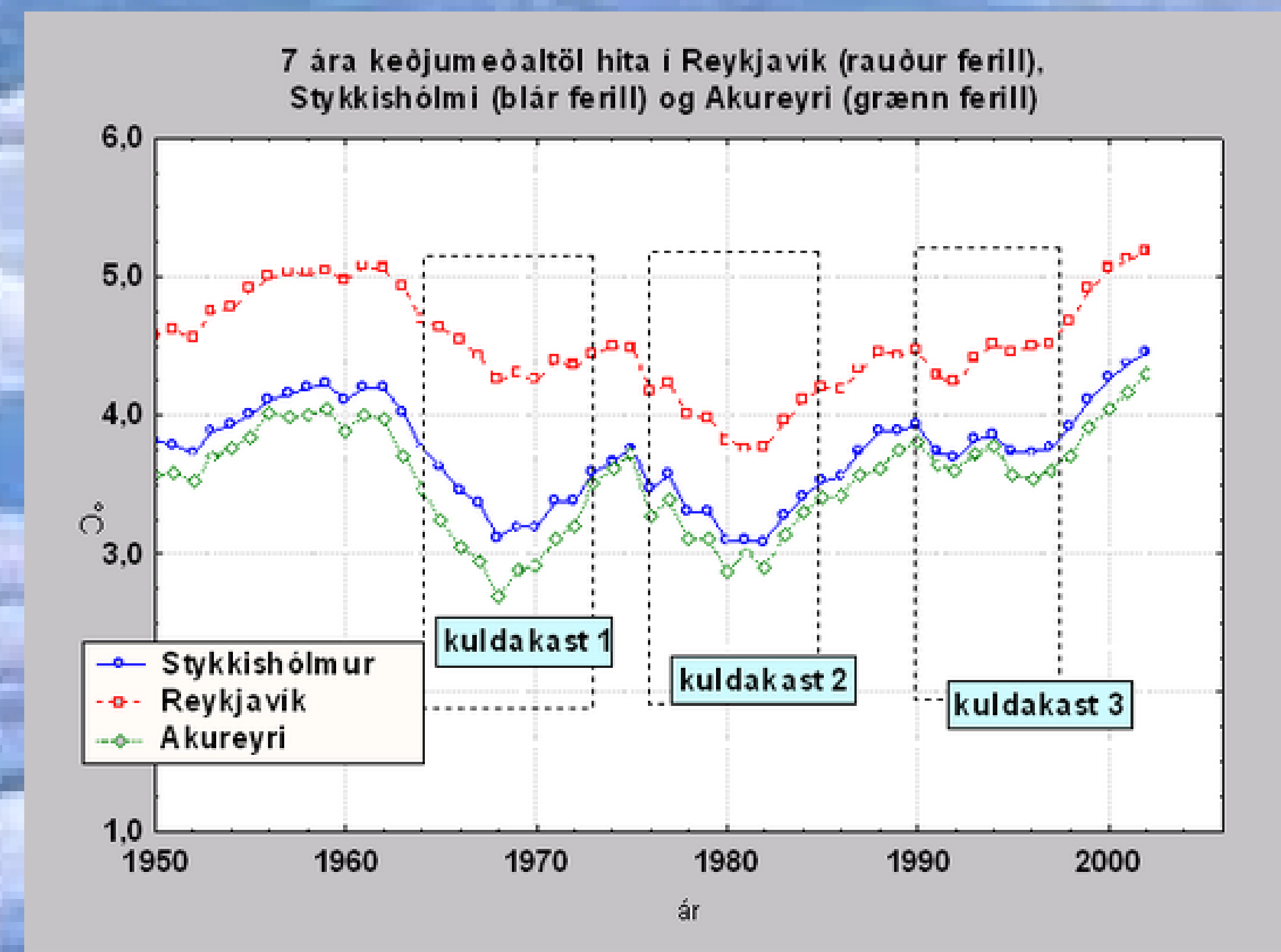


Katalina Montalvo

Junior, B.S Mechanical Engineering
montalvk@my.erau.edu
Advisors: Wesley Lewis, Dr. Kelly George

Abstract

The purpose of this research is to identify Icelanders perception of environmental impact on wildlife caused by global warming. Evidence of climate change can be observed throughout the country. This project reviews the effects of climate in Iceland, the damage the increase in temperature is causing to its fragile ecosystem, and Icelanders account of this change. Results indicate that native Icelanders differ in their perspectives of global warming based on generation. The people of Iceland adapt to changes in weather and its follow-on effect easily as almost an inherent part of their culture. However, the sense of urgency over possible changes in the Gulf Stream and acidification of waters is increasing in their psyche. The future is still unknown for Iceland.



7-year running means of temperature at three locations in Iceland. Kuldakast = cold period. The first of the marked periods was the coldest one in the north (Akureyri), the second one was the coldest in Reykjavík. Jónsson, T. (2008, February 28). Past temperature conditions in Iceland. Retrieved April 05, 2018, from <http://en.vedur.is/climatology/articles/nr/1213>

Methodology

This project looks at individual's perception of environmental changes. The purpose is to identify if global warming is at the forefront of public discussions and/or if the public divided similar to our current society.

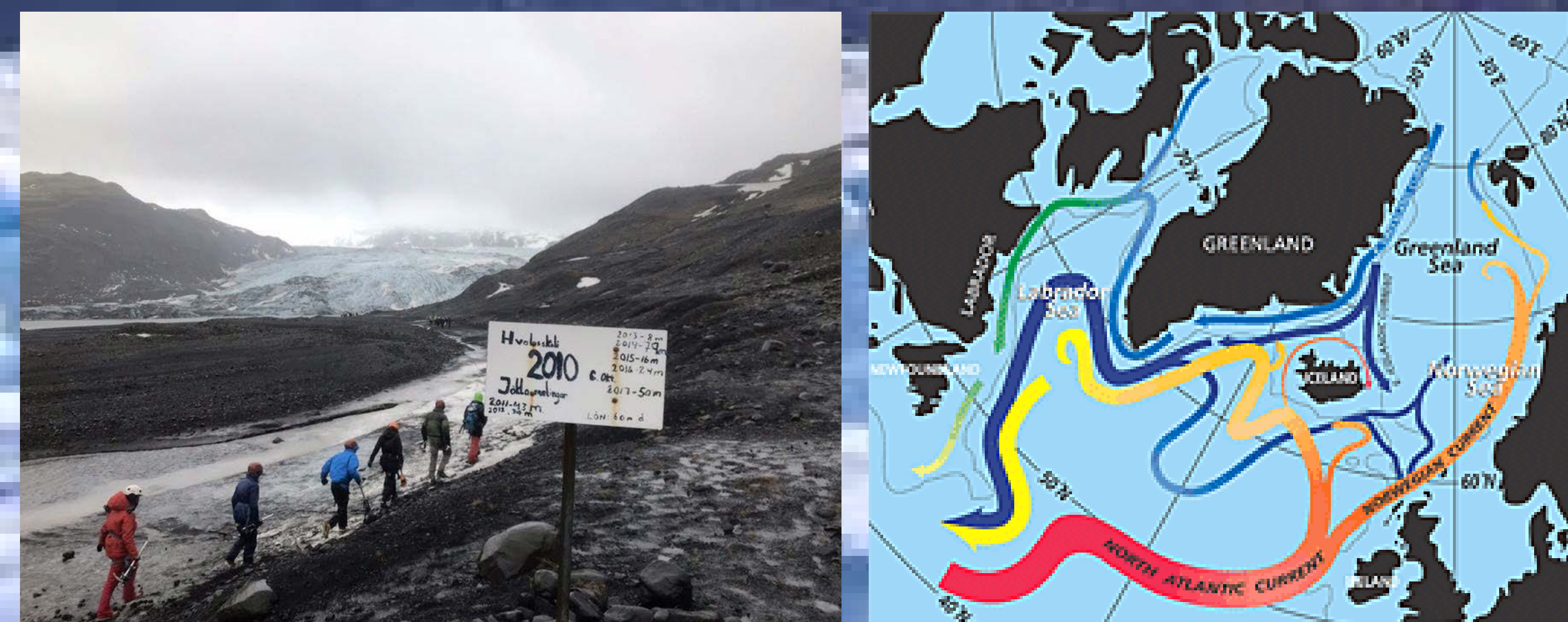
Methodology

Research accumulated regarded global warming, migration patterns of native species, media portrayal of global warming, and animal trends were accumulated. Research Methods Used included;

- Interviews
- Embry-Riddle Hunt Library
- ProQuest
- Google Scholar
- Translated Icelandic Newspaper Articles and Television Broadcasts

Personal observations were made during the trip to Iceland in which media outlets, effects due to global warming, animal behavior, and ecological abnormalities will be observed. Data was collected through several methods; photographs, videos, and a daily personal journal. These observations were found at the locations below.

- Gunnhver Geothermal Sight
- Icelandic Seal Center in Hvammstangi
- Strokkur Geysir geothermal area
- The Sólheimajökull Glacier



On the left is the Sólheimajökull Glacier in Iceland. This sign was placed in 2010 on the border of the glacier. The sign reads the amount of meters the glacier has receded since the sign had been placed. Photo taken by Julianna Martorella March 15 2018. On the right is a photograph of the Gulf Stream that controls the temperature flow around Iceland. LeGrande, A., & Schmidt, G. (2006, January). Modeling an Abrupt Climate Change. Retrieved April 05, 2018, from https://www.giss.nasa.gov/research/briefs/legrande_01/

Methodology

Interview questions

Interviews were also conducted transcribed and or recorded by asking the following questions.

- What is your perspective on global warming? Believe it is real or not?
- Is global warming a frequent topic talked about? When is it talked about?
- Is mentioning of global warming present in media?
- Have you seen the impacts of global warming first hand?
- Have you observed any noticeable temperature or weather pattern changes?
- Have you noticed any differences in animal behavior/physical features/migration patterns?
- Do you believe there is a difference in age groups when talking about global warming?
- Is global warming a topic of conversation among private groups or is it talked about in schools and other public settings?
- Do you think your community/country is putting in enough effort towards reversing global warming?

Findings

Over time global warming has become more present. Icelanders have noticed a variety of first hand changes over time. In older generations, as time has gone on people have reported firsthand accounts about increase in temperature over time, more rain, wind, and lightning. Many have also witnessed a decrease in animal populations while new species migrate to Iceland. This has made it very easy for this generation to believe global warming is real. In contrast, younger generations are taught about conservation and global warming in schools. They are taught that global warming is happening, about some of the changes, and that it will continue to happen.

When interviewed these are some of the effects of global warming that Icelanders mentioned:

- Acidification and warming of the oceans
- Fish migration, new species and reduction of species
- Importance of fish in Iceland economy and the repercussions of migration of fish
- Fear of global warming changing the Gulf Stream
- Increase in temperatures, winds, rains, and lightning
- Reduction in populations of puffins
- Reduction and melting of the glaciers
- Water temperatures not being cold enough for seals
- More bugs being found in new soil along with new bird species
- Increase in volcanic activity
- Iceland Rising
- New crops produced by farmers taking advantage of the new climate

Conclusion

Overall Icelanders shared that they believe "Come what may, we will deal with it as it comes," in terms of global warming. Global warming is a concern of Icelanders, but it is spoken about mainly in school and in politics. The major concerns in terms of global warming would be the acidification of the oceans, a change in the Gulf Stream, and or volcanic eruptions. Each of these will have an effect not only economically, but will cause an global warming to increase by temperature, the melting of the ice caps, more species to decrease in population, migrate more north, or welcome other species to the region.