



# The Right to Mental Health in the Anthropocene: A Case Study of Iceland

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## **Abstract**

This thesis examines the complex intersection of climate change and the right to mental health in Iceland, utilizing a mixed-method approach that combines quantitative analysis of climate and mental health data with qualitative review of policy documents and literature. Grounded in Environmental Stress Theory, Place Attachment Theory and the Human Rights-Based Approach, the research reveals intricate relationships between Iceland's changing environment and psychological well-being. Findings indicate that environmental changes may exacerbate psychological stress, while also highlighting policy gaps in addressing these issues. This study concludes that mitigating the psychological impacts of climate change in Iceland requires a multifaceted strategy to ensure the protection of human rights.

Main keywords: climate change, anthropocene, Iceland, human rights, mental health, psychological wellbeing, place attachment theory, economic stress theory, human rights-based approach

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## **1: Introduction**

Human-lead climate change is one of the most urgent matters faced by humankind today, not only due to its exponential implications for countless generations to come, but also for its unique ability to exacerbate existing inequalities and imbue deep uncertainty in even the most basic of human needs. While many of these concerns are common talking points, from news reports on the spread of mosquito-borne disease stemming from extreme weather events in one part of the world to academic research on land loss experienced after drastic flooding from increased rainfall in another, the mental health implications of these circumstances are much less discussed.

Regions of the world facing other pressing social, political or economic concerns are already at a disadvantage when attempting to tackle any form of external threat. When that threat does not have a face or a voice, negotiation is not an option. This is the case of anthropogenic climate change. Singular natural disasters may have a profound effect on mental health, but when those events are brought on by an escalating set of dangerous climate conditions, those feelings are exacerbated to an alarming degree.

At the same time, countries flush with wealth and opportunity are not immune to climate change – even if they may be at an advantage in handling some of its effects. This reminds us that centering the right to mental health in the international discourse on climate change is in every person’s best interest, because this is a crisis that is impacting every corner of life on Earth.

Known as “the land of fire and ice”, Iceland is home to some of Europe’s largest glaciers as well as a significant number of the most active volcanoes in the world. Its isolated geographical position creates strong cultural ties between its citizen and inhabitants to the natural environment which ultimately offers an interesting case study for examining the intersection of mental health and human rights in the era of anthropogenic climate change.

As a country already experiencing numerous tangible effects of climate change, particularly in relation to glacial retreat, Iceland faces the challenge of adapting to these changes while also protecting the mental health and wellbeing of its small population. This thesis aims to explore this

interplay by examining how climate change in Iceland may be impacting the right to mental health and how existing policies and frameworks are or are not addressing this issue.

### 1.1 Aim and Research Questions

The aim of this thesis is to examine the emerging discourse around human rights and climate change considering the right to mental health in Iceland. The intent is to address the concerns around mental health protections under the larger protections afforded in the right to health in various international human rights treaties.

To achieve this aim, the following research questions will be addressed in this following pages:

#### **Main research question:**

1. How does climate change in Iceland impact the right to mental health as defined by international human rights conventions?

#### **Secondary research questions:**

1. How do Iceland's unique geographical and cultural factors influence the relationship between climate change and mental health?
2. How effective are current Icelandic policies and international human rights frameworks in addressing the mental health impacts of climate change?

### 1.2 Relevance to the Field of Human Rights

This research is significant in several ways to the field of human rights. Firstly, it aims to add to the preexisting discourse on climate change and human rights while further seeking to put a spotlight on the right to mental health. Much attention has been given to protecting property, security and physical health in the face of global warming, while mental health and wellbeing has not yet been given the same level of care, especially from a human rights perspective.

Secondly, by spotlighting the case of Iceland, this study provides insights into how wealthy, developed countries are also grappling with the mental health challenges posed by climate change. These perspectives may then be useful in developing more comprehensive human rights frameworks for addressing climate change impacts in a broader scope. This could be especially true for other culturally, politically, climatically similar countries in the Nordics.

Thirdly, this research highlights the interconnectedness of human rights, demonstrating how climate change can have far-reaching effects on various aspects of human wellbeing, and by extension, their enjoyment of their internationally protected human rights.

Finally, by examining current policies and frameworks, this thesis aims to inform policy development and further lend nuance to the promotion and protection of human rights in the era of anthropogenic climate change.

### 1.3 Delimitations

While this thesis aims to provide an analysis of the impact of climate change on the right to mental health in Iceland, it is important to note delimitations of the thesis:

1. Geographical focus: This study is limited to Iceland and does not provide in-depth comparisons with other countries or regions. While some global context is provided, the primary focus remains on the Icelandic experience. These findings may have close implications for other similarly climate-sensitive Nordic countries, but the aim is to address concerns specific to Iceland.
2. Timeframe: This study considers current and near-future impacts of climate change. Historical context is provided where it is relevant to demonstrate changes over time, however long-term projections are beyond the scope of this thesis due to the inherent unknowns.
3. Specific mental health conditions: While the study considers mental health broadly, it does not provide an exhaustive analysis of all possible mental health conditions that could be impacted by climate change. Further, mental health conditions are not often solely the result

of environmental factors, however, genetic factors of mental health conditions will not specifically be touched upon in this work. It is also important to note that mental health is often self-reported.

4. Policy analysis: While this study intends to examine the effectiveness of current policies, it does not aim to provide a comprehensive review of all Icelandic policies related to climate change or mental health.
5. Legal analysis: While this study will consider relevant human rights conventions and frameworks, specific case law review or legal analysis will not be conducted as part of the scope of this work.
6. Other delimitations: The Atlantic Multidecadal Oscillation (AMO) is a debated 50-80 year variability in the temperature and precipitation patterns in the North Atlantic due to ocean currents and wind patterns.<sup>1</sup> Factoring this into the research would go beyond the scope of the thesis therefore mention of this will not be taken into account.

These delimitations are necessary to maintain a focus on the scope of this thesis while still providing meaningful insights into the research questions.

#### 1.4 Theoretical Overview

This thesis employs a three-pronged theoretical framework to examine the intersection of climate change, mental health and human rights in Iceland. The application of Environmental Stress Theory, Place Attachment Theory and the Human Rights-Based Approach offers a multifaceted lens through which to analyze this relationship.

Environmental Stress Theory, rooted in psychological research, provides a conceptual structure for understanding the psychosocial impacts of environmental changes. This theory describes the mechanisms by which climate-induced changes in the physical environment can manifest as stressors, potentially affecting mental health and well-being. It serves as a crucial tool in deciphering the psychological fallout of climate change in Iceland.

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<sup>1</sup> Mann, M. E., Steinman, B. A., Brouillette, D. A., & Miller, S. K. (2021). Multidecadal climate oscillations during the past millennium driven by volcanic forcing. *Science*, 371(6533), 1014–1019.



Place Attachment Theory explores the profound emotional and psychological connections individuals forge with their surroundings. This theoretical construct holds particular relevance in the Icelandic context, where the natural landscape is deeply interwoven with cultural identity. It offers valuable insights into how climate-induced environmental changes may significantly influence the psychological well-being of Icelanders, given their strong cultural ties to the land.

The Human Rights-Based Approach offers a normative framework for examining the mental health impacts of climate change through the prism of international human rights law. This perspective emphasizes state obligations in protecting and promoting the right to mental health, particularly in the context of environmental challenges. It provides a robust foundation for assessing Iceland's response to climate-related mental health issues.

These theoretical perspectives will be explored in greater depth in Chapter 4, providing a comprehensive analytical framework for investigating the intricate interplay between climate change, mental health, and human rights in Iceland. This multidimensional approach enables a nuanced understanding of the challenges and potential strategies in addressing climate-related mental health issues within a human rights context.

## 1.5 Methodology and Materials

### 1.5.1 Methodology

This study uses a mixed-methods approach involving quantitative data analysis and qualitative review of preexisting literature to examine the stated research questions.

The research has three aspects:

1. **Quantitative Analysis of Climate and Mental Health Data:** This involves collecting and analyzing data from various sources, including the Icelandic Meteorological Office, the Icelandic Directorate of Health and national surveys.

2. Qualitative Analysis of Academic Literature: This involves a review of relevant policy documents, reports and academic literature on the topic of climate change, mental health and human rights in Iceland.
3. Theoretical Framework Application: This involves applying the previously stated theoretical framework of examining environmental stress theory, place attachment theory and the Human Rights-Based Approach in relation to the data and literature.

A more detailed description of the methodology will be provided in Chapter 5.

### 1.5.2 Materials

The materials used in this thesis cover a wide range of sources which have been carefully selected to provide a nuanced understanding of the impact of climate change on the right to mental health in Iceland. These materials can be categorized in several broad groups:

1. Scientific Reports and Climate Data: This includes reports from the Icelandic Meteorological Office which provides data on temperature and precipitations patterns and glacial retreat. International climate reports will also add more context on global climate change predictions and patterns.
2. Mental Health Statistics: This includes data from the Icelandic Directorate of Health which will supplement the mental health analysis. Further reports from national health surveys will also add context to the self-reported mental health of the Icelandic population.
3. Government Policy Documents: This includes Iceland's Climate Action Plan and other national mental health policies. These are essential for understanding and identifying gaps in the current policy landscape in Iceland.
4. Academic Literature: A wide range of academic articles from fields such as human rights law, environmental psychology, climate science and public health have been utilized for the basis of this thesis and the focus on the theories of Environmental Stress Theory, Place Attachment Theory and the Human Rights-Based Approach.

5. Demographic Data: This data is specific to Iceland and provides the understanding for population distribution from which age, location and industry-specific conclusions can be formed.
6. International Human Rights Documents: This includes relevant reference to UN human rights conventions to display the right to mental health.
7. Media Reports: This includes the sparse use of media reports to offer insight into the public perception of climate change in Iceland and its specific mental health impacts.
8. Cultural Sources: This is used to develop the basis for this paper's interpretation of place attachment theory in the context of Iceland.

## 1.6 Chapter Outline

The thesis is structured as follows:

Chapter 1: Introduction – The background, aim, research questions and delimitations are stated and the significance of the study is explained.

Chapter 2: Overview of Iceland – A comprehensive overview of the Icelandic population, current climate, changes in climate patterns and projected impacts are explained.

Chapter 3: The Right to Mental Health – Outlines the framing of mental health as a human right and discusses relevant human rights conventions.

Chapter 4: Theory – Examines the chosen theories which propel this research: environmental stress theory, place attachment theory and the human rights-based approach.

Chapter 5: Methodology – Explains the research design, methods and approach to the analysis.

Chapter 6: Analysis – Presentation of the results of the thesis and draws connections to the states research questions.

Chapter 7: Conclusion and Findings: Further summarizes the findings, discusses possible implications of the research and suggest recommendations for further research.

Given the above outline, this thesis aims to provide a thorough analysis of the impact of climate change on mental health in Iceland to fill a gap in knowledge and add to this burgeoning discourse.

## **Chapter 2: Overview of Iceland**

To create a basis with which to understand the impacts of climate change on mental health in Iceland, it is first important to gain and understanding the place itself. This is meant to offer an overview of this small Nordic nation in contexts that are applicable to the topic of the thesis. This is not meant to gain a full cultural and historical picture of the country, although historical and cultural points will be added where relevant.

### 2.1 Country Overview

Iceland is a Nordic nation situated on a small island in the North Atlantic Ocean which boasts a diverse landscape with dramatic geological features which have long been a point of national pride for this small country. As one of the most sparsely populated countries in Europe, Iceland's population stands at only 383,726 individuals as of 1 January 2024.<sup>2</sup> The population had been growing in recent years due to a high birth rate and steady immigration.

#### 2.1.1 Age Structure:

With a median age of 38.8, the overall age structure of Iceland stands as follows according to 2023 data:<sup>3</sup>

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<sup>2</sup> *Overview*. Statistics Iceland. (n.d.). <https://www.statice.is/statistics/population/inhabitants/overview/>

<sup>3</sup> Dyvik, E. H. (2024, July 4). *Iceland: Population by age 2023*. Statista. <https://www.statista.com/statistics/594621/total-population-in-iceland-by-age/>

- 0-19 years of age: 94,296 inhabitants
- 20-39 years of age: 117,465 inhabitants
- 40-59 years of age: 96,418 inhabitants
- 60-79 years of age: 66,206 inhabitants
- 80 years of age and older: 13,373 inhabitants

The demographic composition of Iceland provides crucial context for understanding the potential long-term impacts of climate change on mental health across different age groups. The substantial proportion of young Icelanders represents a generation that will experience the evolving effects of climate change throughout their lifetimes, potentially facing prolonged exposure to associated mental health challenges. Conversely, the older segment of the population offers a unique perspective, having observed the gradual yet profound alterations in Iceland's iconic natural landscapes over several decades.

### 2.1.2 Urbanization, Education and Immigration

Approximately two thirds of the nation lives in the capital region in and around Reykjavík. As a highly urbanized nation, Iceland is technologically advanced with a high level of infrastructure. Iceland has a high level of education and the population has one of the highest literacy rates in the world, standing at nearly 100%.

As of 2023, foreign nations amounted to roughly 72,960 inhabitants while Icelandic nationals residing in the country amounted to approximately 324,000.<sup>4</sup> It is important to note that these numbers do not match up with the previously stated population total of Iceland as this data is collected quarterly and rounded up. These numbers are included to demonstrate the large number of immigration to this small population.

In 2022, a vast majority of immigration to Iceland came from Poland, with a total of 3,780 individuals moving to the nation. This was followed by immigration from Ukraine and Romania,

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<sup>4</sup> Population by municipality, sex, citizenship and quarters 2010-2023. Statistics Iceland. (2023, October 26). [https://px.hagstofa.is/pxen/pxweb/en/Ibuar/Ibuar\\_\\_mannfjoldi\\_\\_1\\_yfirlit\\_\\_arsfjordungstolur/MAN10001.px](https://px.hagstofa.is/pxen/pxweb/en/Ibuar/Ibuar__mannfjoldi__1_yfirlit__arsfjordungstolur/MAN10001.px)

standing at 2,284 and 1,026 individuals, respectively.<sup>5</sup> Immigration from Poland is so common to Iceland that many websites offer their content in Icelandic, English and Polish.

It's worth noting that Iceland has also welcomed refugees and asylum seekers, albeit in relatively small numbers. This has added further layers of cultural diversity to the nation's demographic makeup.<sup>6</sup> The interplay between Iceland's native population and its newer residents creates a unique social dynamic. It presents both opportunities and challenges as the country navigates the preservation of its rich cultural heritage while embracing the benefits of increased diversity.<sup>7</sup>

This demographic profile undoubtedly plays an important role in shaping Iceland's response to the various challenges associated with climate change and mental health, as is the topic of this thesis.

### 2.1.3 Religion and Culture

According to data from 2024, a total of 233,725 individuals in Iceland were paying parish fees to a variety of religions in the country. The Evangelical Lutheran Church of Iceland has the highest amount of these fee payers with a total of 184,500 individuals. The Roman Catholic Church is the second most represented religious organization in the country with a total of 11,944 fee payers.<sup>8</sup>

Icelandic culture is a blend of ancient traditions with modern aspects, often rooted in the country's drastic landscape and history. The Icelandic people take great pride in their literary heritage, particularly the medieval Sagas, which continue to influence contemporary Icelandic literature and art.<sup>9</sup>

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<sup>5</sup> Dyvik, E. H. (2024a, July 4). *Iceland: Immigration by country of origin 2022*. Statista. <https://www.statista.com/statistics/595181/number-of-immigrants-by-country-of-origin-in-iceland/>

<sup>6</sup> Wendt, N., & Ísleifsson, S. R. (2019). Refugees in Iceland: State policy and public opinion. In G. Thorleifsson (Ed.), *Nordic Responses to Migration and Ethnic Diversity*. Palgrave Macmillan.

<sup>7</sup> Þórarinsdóttir, H. (2020). The challenges and opportunities of diversity in Iceland. *Nordic Journal of Migration Research*, 10(2), 69-85.

<sup>8</sup> Religious organisations. Statistics Iceland. (n.d.-b). <https://www.statice.is/statistics/society/culture/religious-organisations/>

<sup>9</sup> Neijmann, D. L. (2015). *Colloquial Icelandic: The Complete Course for Beginners*. Routledge.

A strong connection to its dynamic nature is a strong feature of Icelandic culture. The harsh natural environment has played a significant role in shaping Icelanders over the ages, fostering resilience and adaptability among its people. This is evident in traditional practices such as the þorrablót midwinter festival, which celebrates historical food preservation methods.<sup>10</sup>

Former president of Reykjavík University, Svafa Grönfeldt, has stated that, historically, the “battle with the forces of nature, weather, storms, volcanic eruptions and isolation had fashioned individuals determined to survive whatever occurred”<sup>11</sup> which succinctly highlights the resilience bred in the culture of Iceland over generations of trials and triumphs.

#### 2.1.4 Health

Iceland has a world-class healthcare system which generally affords its residents favorable health outcomes. Life expectancy in Iceland is one of the highest in the world with women having an average life expectancy of 83.8 years while men have an average life expectancy of 80.9 years.<sup>12</sup>

The importance of mental health is also highly regarded in the country, although issues have arisen in recent years due to increased demand for access. Due to this, wait times are increasing and currently exceed government aims according to a 2022 report from the Icelandic National Audit Office. The report cites staffing and funding issues as creating barriers to care for those seeking mental health help. It recommends that health care services would benefit from greater coordination so that more people can gain access and less people will fall through the cracks.<sup>13</sup>

#### 2.1.5 Climate-Sensitive Industries

The economic landscape of Iceland is closely tied to the natural environment, with a small yet significant portion of the population employed in climate-sensitive industries. Agriculture and

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<sup>10</sup> Hastrup, K. (1998). *A Place Apart: An Anthropological Study of the Icelandic World*. Oxford University Press.

<sup>11</sup> Grönfeldt, S. (2007, March 18). Þekking, kraftur og þrautseigja. *Morgunblaðið*, pp. 8–9.

<sup>12</sup> Dyvik, E. H. (2024b, July 4). *Iceland: Life Expectancy 2022*. Statista.

<https://www.statista.com/statistics/1050679/average-life-expectancy-at-birth-in-iceland-by-gender/>

<sup>13</sup> Government of Iceland, Ministry for the Environment and Natural Resources (2020). (publication). *Iceland's Climate Action Plan for 2018-2030*.

aquaculture, despite the country's harsh climate and limited arable land, plays a crucial role in Iceland's economy and culture. According to Statistics Iceland data from spring 2024, the following are the total number of people working in related fields as their primary employment:<sup>14</sup>

- Agriculture, forestry, fishing: 6,277
- Crop and animal production, hunting, forestry and related services: 3,356
- Fishing and aquaculture: 2,928
- Fishing industry: 8,396

It is important to note that these statistics cover some the roles most impacted by climate and precipitation changes; however, many other industries can also face harsh challenges. Tourism, hospitality, manufacturing and construction – among many other industries – are also at risk for climate change-related damages, often stemming from the cascade effects of global warming, which will be touched upon below.

Livestock, particularly sheep and cattle, are the main focus of the agriculture sector in Iceland. This industry is specifically in danger from temperature and precipitation changes due to climate change which can impact grass growth for livestock and alter the growing season for important crops.

Fishing and fish processing, another climate-sensitive industry, has historically been a cornerstone of Iceland's economy. This industry is highly susceptible to climate change effects, including ocean warming and acidification, which can impact fish stocks and migration patterns.

The tourism sector is another climate-sensitive industry that is a major player in Iceland's economy. It is estimated that tourism directly and indirectly accounts for about 32,011 people, as of spring 2024.<sup>15</sup> Many of these jobs revolve around nature-based tourism, involving the country's unique natural features which are being impacted by climate change.

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<sup>14</sup> Register based employment in main job by economic activity by quarters sex, age groups and origin 2008-2024. PxWeb. (2024, August 7).

<sup>15</sup> Register based employment in main job by economic activity by quarters sex, age groups and origin 2008-2024. PxWeb. (2024, August 7).



While these are not overwhelming numbers, taken in the context of Iceland's small population size, these are significant swaths of the population whose jobs are either directly or closely tied to climate-sensitive industries. This highlights the strong potential for economic vulnerabilities for these people as well as the economy at large due to climate change impacts. It also demonstrates the personal stake many Icelanders and residents have in the changing of their climate which may undoubtedly influences their potential psychological response to climate change.

## 2.2 Climate Change in Iceland

Iceland's unique geographical position in the North Atlantic Ocean, with its mainland situated just south of the Arctic Circle, creates a climate characterized by severe conditions, including high winds and heavy precipitation, albeit with temperatures milder than its latitude might suggest.<sup>16</sup>

The nation's geological situation is further seen in its location between the Eurasian and North American tectonic plates, contributing to significant seismic and volcanic activity in the region.<sup>17</sup> These distinctive geographical and geological features, combined with other environmental factors, leave Iceland particularly vulnerable to the impacts of global climate change.

### 2.2.1 Key Environmental Changes

#### *Temperature Increase:*

The Icelandic Meteorological Office (IMO) states that in the Arctic, warming patterns are predicted to be more extreme in the winter months while having less impact on the summer months of the year. This will cause the weather difference between winter months and summer months of the year to vary less so that those seasonal cycles will be less pronounced.<sup>18</sup>

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<sup>16</sup> Climate Report. Icelandic Meteorological Office. (n.d.). <https://en.vedur.is/climatology/iceland/climate-report>

<sup>17</sup> Matthíasson, B., & Kristinsson, V. (2024, July 6). Iceland. Encyclopædia Britannica. <https://www.britannica.com/place/Iceland>

<sup>18</sup> Climate Report. Icelandic Meteorological Office.

Compared to the mean temperature of 1961-1990, the decades of 1991-2000 and 2001-2010 each saw an average increase up to 1.25°C, notably the IMO monitored a trend of 0.47°C temperature increase from 1980-2016. These trends are expected to continue or worsen in the coming decades even if greenhouse gas emission goals are met or exceeded.<sup>19</sup>

It is notable that there are some, at current, favorable impacts of global warming. The IMO has stated that warmer summers lend themselves to longer growth seasons and higher yields for some crops. Additionally, studies have shown that a 1°C increase in springtime temperatures could yield 11% higher hay production with a 1.5°C summertime increase opening the potential for even more crops to be grown.<sup>20</sup> However, with anthropogenic climate change, these predictions may be untenable, short-lived or have unseen side-effects.

#### *Glacier Retreat:*

Iceland witnessed a period of glacier growth between the 1960's into the 1980's when two thirds of the glaciers monitored by the Icelandic Meteorological Office had advanced to varying degrees. However, by the end of the 1990's almost 90% of these glaciers had begun to retreat and in recent years that percentage has risen to 100% of the monitored glaciers. Some glaciers have melted to an irreversible degree and other have disappeared altogether.<sup>21</sup>

Vatnajökull is the country's largest glacier covering 7,900km<sup>2</sup> with a depth of 900 meters at the thickest point, it is larger than all other glaciers in Europe combined. Covering 11% of the total area of Iceland,<sup>22</sup> its glaciers are a key aspect of the landscape and offer one of the most visible effects of climate change in the country.

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<sup>19</sup> Bannan, D., Ólafsdóttir, R., & Hennig, B. D. (2022). Local perspectives on climate change, its impact and adaptation: A case study from the Westfjords region of Iceland. *Climate*, 10(11), pp.2-3.  
<https://doi.org/10.3390/cli10110169>

<sup>20</sup> ClimateChangePost. (n.d.). Agriculture and Horticulture. Climate Change Post.  
<https://www.climatechange.com/countries/iceland/agriculture-and-horticulture/#:~:text=1.2%C2%B0C%20compared%20to,increases%20hay%20production%20by%2011%25>.

<sup>21</sup> Climate Report. Icelandic Meteorological Office.

<sup>22</sup> Glaciers. Náttúrufræðistofnun Íslands. (n.d.). <https://www.ni.is/en/geology/water/glaciers>

It is predicted by the Icelandic Institute of Natural History that if all the glaciers in Iceland were to melt, it would contribute 1cm to global sea level rise.<sup>23</sup>

#### *Changing in Precipitations Patterns:*

Global warming is impacting precipitation patterns in Iceland. Overall, precipitation has increased, especially in the southern and western parts of the country. Distribution of yearly precipitation is also changing, with colder months facing more drastic changes.

Below are the average precipitation changes in Iceland according to the Climate Change Knowledge Portal between the years 1901-1930 and 1991-2020.<sup>24</sup>

- December-February precipitation increased from 265.81mm to 343.31mm
- March-May precipitation increased from 182.99mm to 249.65mm
- June-August precipitation increased from 190.93mm to 234.6mm
- September-November precipitation increased from 290.68mm to 373.22mm

These changes in precipitation patterns have and will continue to be noticeable in various ways in disparate areas. For the Westfjords, a large peninsular region in northwestern Iceland, the high slopes will face greater and more frequent risk of rockslides and landslides as well as a greater occurrence of avalanches due to increased rainfall and snowmelt.

Ultimately, these changes can lead to “damage to infrastructure, evacuations, road closures, increased expenditure on protection and, in the worst case, loss of life.”<sup>25</sup>

#### *Ocean Acidification and Warming:*

The marine environment surrounding Iceland is experiencing ocean warming and acidification due to climate change. These concerns are altering the physical and chemical characteristics of

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<sup>23</sup> *Ibid.*

<sup>24</sup> World Bank Climate Change Knowledge Portal. Climatology | Climate Change Knowledge Portal. (n.d). <https://climateknowledgeportal.worldbank.org/country/iceland/climate-data-historical>

<sup>25</sup> Bannan, D., et al. (2022). pp. 14-16.

Iceland's waters, with negative implications for marine ecosystems and the nation's fishing industry.

Ocean warming is a known consequence of global climate change. The world's oceans have absorbed approximately 90% of the heat generated by greenhouse gas emissions.<sup>26</sup> In the context of Iceland, this has manifested as a notable increase in sea surface temperatures. Some areas of the North Atlantic, including waters around Iceland, have experienced warming rates of up to 0.1°C per decade since the 1990s.<sup>27</sup>

Ocean acidification presents an additional concern to aquatic environments. This is caused by the ocean absorbing an increased amount of the carbon dioxide that is found in the atmosphere in a higher concentration due to global warming, causing a decrease in pH. It is expected that, “without intervention, the long-term consequences of ocean acidification could be devastating for marine biodiversity and the communities that depend on it.”<sup>28</sup> The waters around Iceland have experienced a 30% increase in acidity since industrialization.<sup>29</sup>

#### *Extreme Weather Events:*

Extreme weather events have been and are projected to continue occurring at accelerating rates in Iceland which present a compelling case study of the localized impacts of climate change in the country. This small nation, historically characterized by harsh weather patterns, is experiencing a shift towards more frequent and severe meteorological events that may bring challenges to infrastructure and resilience in the community.

Recent climatological data indicate a marked increase in the occurrence of winter storms in Iceland, often accompanied by exceptionally high winds and heavy precipitation. These events not only pose immediate risks to public safety but also exert long-term stress on the country's built

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<sup>26</sup> Cheng, L J., Zhu, J., Abraham, J., (2019) 2 018 continues record global ocean warming. *Advances in Atmospheric Sciences* 36(3), pp.249–252, <https://doi.org/10.1007/s00376-019-8276-x>.

<sup>27</sup> Hátún, H., Sandø, A. B., Drange, H., Hansen, B., & Valdimarsson, H. (2005). Influence of the Atlantic subpolar gyre on the thermohaline circulation. *Science*, 309(5742), 1841–1844. <https://doi.org/10.1126/science.1114777>

<sup>28</sup> Gray Group International LLC. (2024, April 11). *Ocean pollution: Addressing a critical environmental threat*. Gray Group International. <https://www.graygroupintl.com/blog/ocean-pollution>

<sup>29</sup> Olafsson, J., Olafsdottir, S. R., Benoit-Cattin, A., Danielsen, M., Arnarson, T. S., & Takahashi, T. (2009). Rate of iceland sea acidification from time series measurements. *Biogeosciences*, 6(11), 2661–2668. <https://doi.org/10.5194/bg-6-2661-2009>

environment and transportation networks. This trend is of particular concern given the potential for increased flooding, especially in areas proximal to glacial rivers where climate-induced glacial retreat is already altering these patterns.<sup>30</sup>

While overall precipitation is projected to increase, some regions of Iceland are experiencing more frequent summer dry spells.<sup>31</sup> This phenomenon, though less dramatic than storm events, has significant implications for agriculture. Further, the increasing unpredictability of weather patterns poses challenges for various sectors of the Icelandic economy, notably tourism and fishing, which are heavily reliant on stable and foreseeable environmental conditions.

Moreover, the unpredictability and intensity of these extreme weather events can contribute to increased stress and anxiety among the population, highlighting the complex relationship between climate change, extreme weather and mental health in Iceland.

#### *Ecosystem Changes:*

Warming temperatures and changing precipitation patterns are expected to lead to shifts in Iceland's ecosystems. This could include changes in vegetation patterns, with some Arctic plant species retreating and boreal species expanding their range. As temperatures rise and precipitation patterns shift, Iceland's precious biomes will undoubtedly see transformation.

These ecosystem changes are not occurring in isolation but are deeply connected to broader environmental shifts. For instance, changes in vegetation patterns could alter soil composition and hydrology, while marine ecosystem shifts may influence coastal dynamics. The cascading effects of these changes demonstrates the need for a comprehensive approach to climate change adaptation in Iceland.<sup>32</sup>

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<sup>30</sup> Ólafsson, H., Furger, M., & Brümmer, B. (2007). The weather and climate of Iceland. *Meteorologische Zeitschrift*, 16(1), 5–8. <https://doi.org/10.1127/0941-2948/2007/0185>

<sup>31</sup> Bannan, D., et al. (2022). pp. 17-18.

<sup>32</sup> Halldórsson, G., Sigurdsson, B., Oddsdóttir, E., & Hrafnkelsdóttir, B. (2013). New arthropod herbivores on trees and shrubs in Iceland and changes in pest dynamics: A review. *Icelandic Agricultural Sciences*, 26(1), 69–84.

### *Economic Impacts:*

Climate change is projected to have numerous negative impacts on climate-sensitive sectors that contribute to Iceland's economy, as well as the workers in those industries. These sectors, including fishing, agriculture and tourism, are an important part of Iceland's economy as a whole.

The fishing industry may be affected by changes in fish stock distributions from ocean acidification and warming of the waters. One issue that has arisen is the overabundance of mackerel being found in the waters around Iceland as they have been attracted by the warmer seas.<sup>33</sup> This has caused quota distribution concerns between the Association of Icelandic Fishing Companies and the United Kingdom, Faroe Islands and Norway after a trilateral treaty was formed allowing the countries to fish up to 72% of the mackerel collectively in 2024. Iceland has cited sustainability and fairness issues with the treaty.<sup>34</sup>

Changing climate conditions may also lead to the emergence of new pest species and plant diseases, posing threats to both established and newly viable crops. Furthermore, the increased variability in weather patterns, including more frequent extreme events such as droughts or intense rainfall, could lead to unpredictable yields and potential crop failures.<sup>35</sup>

The tourism industry, which relies heavily on Iceland's unique natural landscapes, may also face challenges as glaciers retreat and ecosystems change. Although warmer temperatures may extend the tourist season, the melting of Iceland's iconic glaciers – a major draw for tourist to the island – could negatively impact the country's appeal. While this may seem of little consequence, tourism was estimated to account for 8.5% of the country's gross domestic product (GDP) in 2023.<sup>36</sup>

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<sup>33</sup> Astthorsson, O. S., Valdimarsson, H., Gudmundsdottir, A., & Óskarsson, G. J. (2012). Climate-related variations in the occurrence and distribution of mackerel (*Scomber Scombrus*) in Icelandic Waters. *ICES Journal of Marine Science*, 69(7), 1289–1297.

<sup>34</sup> McBride, O. (2024, June 20). *Fisheries Iceland expresses discontent over trilateral mackerel agreement*. The Fishing Daily - Irish Fishing Industry News.

<sup>35</sup> Halldórsson, G., et al. (2013), pp. 69-84.

<sup>36</sup> The share of tourism in GDP estimated at 8.5% in 2023. Statistics Iceland. (n.d.).

<https://www.statice.is/publications/news-archive/national-accounts/the-share-of-tourism-in-gdp-2023-provisional-estimates/>

These climate-induced changes necessitate adaptive strategies across all climate-sensitive sectors to mitigate economic risks, highlighting the need for improved climate policy integration in Iceland's economic future.

The visible and rapid nature of these changes, particularly glacier retreat, may have significant psychological impacts on Iceland's population, given their strong cultural connection to the land. Further, the uncertainty surrounding future impacts and the potential for disruption to key economic sectors could contribute to increased anxiety and stress among the population.

It is well understood that mental and physical health are deeply intertwined. Prolonged distress is a known factor in sleep disturbance, leading to a higher risk of sleep disorders. This can in turn leave individuals more susceptible to illness or further deepen existing mental health woes. Additionally, stress can lower the functionality of the immune system and increase the risk of many diseases such as cardiovascular disease, autoimmune disease and some cancers.<sup>37</sup>

### 2.2.2 Governmental Policy

Iceland's Climate Action Plan for 2018-2030 lays out the country's leading measures to combat and mitigate climate change. It has a stated goal of reducing carbon emissions to goals in line with the Paris Agreement by 2030 – producing more than one million tons of CO<sup>2</sup> less than 2005 numbers in relevant industries – and further, gaining carbon neutrality by 2040.<sup>38</sup>

This document details the expectations put on various industries in leading more environmentally friendly practices. This includes reducing the use of fertilizers and tackling emissions from manure, prioritizing low emissions vehicles, implementing landfill taxes and banning the use of landfills for organic waste, among other actions.<sup>39</sup>

Further, there is brief mention of the implementation of climate strategies in other public agencies being “in preparation” however there is no specific mention of climate change education in the

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<sup>37</sup> Cianconi P, Betrò S., and Janiri L. (2020) The impact of climate change on mental health: a systematic descriptive review. *Frontiers in Psychiatry*.

<sup>38</sup> Government of Iceland, Ministry for the Environment and Natural Resources (2020). (publication). *Iceland's 2020 Climate Action Plan*.

<sup>39</sup> *Ibid.*

healthcare sector, climate and mental health education in schools or any cross-reference between the two. Points regarding education are also focused on sharing knowledge on the individual's impacts on climate change and possible measures to reduce their carbon footprint. There is no mention of educating on the impact of climate change on the individual's wellbeing or its potential to hinder their human rights.

### 2.3 Mental Health in Iceland

The Directorate of Health is the leading body in Iceland responsible for promoting mental health wellness. Their aim is to “promote mental health and wellbeing among the citizens” by placing emphasis on “improving mental health knowledge and the factors to producing good mental health”<sup>40</sup>

A 2023 study showed that Icelandic youths have more pronounced mental health struggles than older generations. Additionally, men and individuals of lower socioeconomic brackets show increased occurrence of poor mental health<sup>41</sup> which is on trend with worldwide averages. Norden, the Nordic Center for Welfare and Social Services, considers mental health one of the most profound and pressing public health issues in the Nordic countries.<sup>42</sup>

Struggles with ease of access and extended waiting times for care are plaguing the Icelandic healthcare system due, in part, to understaffing and older, more experienced specialist only taking part-time employment. Further, access to care is described as “uneven” with higher difficulty of access seen in the rural areas of the country.<sup>43</sup>

The most recent health policy from the Government of Iceland is meant to serve as a guide point for healthcare policy until 2030. It is stated that “The main goal of Iceland’s health legislation is

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<sup>40</sup> *Mental health - recommendations from the Directorate of Health. Ísland.is.* (n.d.). <https://island.is/en/mental-well-being>

<sup>41</sup> Sigurðardóttir, S., Aspelund, T., Guðmundsdóttir, D.G. et al. (2023) Mental health and sociodemographic characteristics among Icelanders, data from a cross-sectional study in Iceland. *BMC Psychiatry* 23, 30

<sup>42</sup> Arnardóttir, J. R. (2016). *Mental health among youth in Iceland: Who is responsible? What is being done?* <https://urn.kb.se/resolve?urn=urn:nbn:se:norden:org:diva-4748>

<sup>43</sup> Government of Iceland, Ministry of Health (2019). (publication). *Health Policy: A policy for Iceland’s health services until 2030.*



that all people in the country should have access to the best possible services that can be provided at any given time to protect their mental, physical and social health.”<sup>44</sup>

When describing health in a broader context, the document mentions environmental factors such as access to clean water and food, however this stops short of mentioning climate change and global warming impacts in any context.

With 21% of Icelanders reporting their mental health as passable or poor, it can be determined that psychological health is a concern on the minds of a large number of individuals in the country.<sup>45</sup>

### **Chapter 3: The Right to Mental Health**

The idea of mental health as a fundamental human right has garnered increasing traction in recent years. This chapter examines the framework of mental health within the field of human rights, describes the responsibilities of states in promoting and safeguarding mental well-being and explores the specific implications of this rights-based approach for Iceland in regard to climate change.

#### 3.1 Overview of Relevant Human Rights Conventions

The right to mental health is included in several key international human rights conventions and declarations. These documents form the legal and normative framework within which the right to mental health is understood and protected. The most relevant conventions include:

1. Universal Declaration of Human Rights (UDHR): In 1948, this document laid the groundwork for the human rights of all people to be recognized and enshrined in a declaration of this size, opening the potential for all subsequent human rights treaties. Article 25 states that "*Everyone has the right to a standard of living adequate for the health*

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<sup>44</sup> *Ibid.*

<sup>45</sup> *Ibid.*

*and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services.*"<sup>46</sup>

2. International Covenant on Economic, Social and Cultural Rights (ICESCR): Article 12 recognizes *"the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."*<sup>47</sup> This covenant is particularly significant as it explicitly mentions mental health.
3. Convention on the Rights of Persons with Disabilities (CRPD): This convention reinforces the rights of persons with mental health conditions and emphasizes the importance of community-based services and support.<sup>48</sup>
4. European Convention on Human Rights (ECHR): While not explicitly mentioning mental health, the ECHR has been interpreted by the European Court of Human Rights to include protections relevant to mental health under Articles 3 (prohibition of torture) and 8 (right to respect for private and family life).<sup>49,50</sup>
5. Convention on the Rights of the Child (CRC): Article 24 recognizes the right of the child to the enjoyment of the highest attainable standard of health, which has been interpreted to include mental health.<sup>51</sup>

Iceland is a signatory to all these conventions, which places legal obligations on the state to respect the right to mental health.

### 3.2 Framing Mental Health as a Human Right

The framing of mental health as a human right represents a significant shift in how mental health is understood and addressed globally. Previously, the concept of mental health was simply the

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<sup>46</sup> *Universal Declaration of Human Rights*, United Nations General Assembly, (10 December 1948).

<sup>47</sup> *International Covenant on Economic, Social and Cultural Rights*, United Nations General Assembly. (16 December 1966)

<sup>48</sup> *Convention on the Rights of Persons with Disabilities*, United Nations General Assembly (12 December 2006)

<sup>49</sup> *European Convention on Human Rights*, Council of Europe (3 September 1953)

<sup>50</sup> Nilsson, A. (2023). The European Court's incremental approach to the protection of liberty, dignity and autonomy. In *Routledge Handbook of Mental Health Law*, 1st ed., pp. 83–90.

<sup>51</sup> *Convention on the Rights of the Child*, United Nations General Assembly (20 November 1989)

absence of a mental illness,<sup>52</sup> without taking to account other concerns or variables to well-being. This reframing showcases several important factors:

1. Universality: Mental health, as each human rights, is recognized as a fundamental right for all people, regardless of their race, religion or other factor.
2. Indivisibility: The right to mental health is interconnected with other human rights, such as the right to dignity, non-discrimination, having an adequate standard of living and being free from torture – among others.<sup>53</sup>
3. Accountability: States and other duty-bearers are responsible for the protection of mental health rights.
4. Non-discrimination: Mental health services and protections should be accessible to all people without discrimination.<sup>54</sup>

### 3.3 World Health Organization

The World Health Organization (WHO) has been a key figure in promoting this rights-based approach to mental health. The WHO defines mental health as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community."<sup>55</sup>

Further, the WHO has stated, "Exposure to unfavorable social, economic, geopolitical and environmental circumstances – including poverty, violence, inequality and environmental deprivation – also increases people's risk of experiencing mental health conditions."<sup>56</sup>

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<sup>52</sup> Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2015). Toward a new definition of mental health. *World Psychiatry*, 14(2), 231–233.

<sup>53</sup> International Covenant on Economic, Social and Cultural Rights, United Nations General Assembly.

<sup>54</sup> United Nations. (n.d.). *Human rights*. United Nations.

<sup>55</sup> World Health Organization. (17 June 2022). *Mental health*. World Health Organization.

<sup>56</sup> *Ibid*.

Increasing positive outcomes from mental health promotion and prevention are best achieved through collective efforts. This involves not only tackling concerns at the individual level, but also in groups and entire populations. This necessitates taking measures outside of healthcare and mental healthcare facilities by also promoting psychological wellbeing in other sectors such as education and environment as well. This can be achieved by “advocating, initiating and, where appropriate, facilitating multisectoral collaboration and coordination.”<sup>57</sup>

This framing of mental health as a human right is particularly relevant in the context of climate change. It provides a legal and ethical framework for addressing the psychological impacts of environmental changes and for holding states accountable for protecting the psychological wellbeing of their populations in the face of climate-related challenges.

### 3.4 Obligations of the State to Promote and Protect Mental Health

In the realm of mental health protection within the context of climate change, states bear significant responsibilities that are often embedded within broader human rights frameworks. These obligations can be summed in three requirements: respect, protect and fulfill.<sup>58</sup>

The obligation to respect requires states to refrain from actions that might impede the enjoyment of the right to mental health. In the climate change context, this could entail avoiding policies that exacerbate climate-related psychological stressors or discriminate against those experiencing climate-induced mental health challenges.

The duty to protect necessitates that states safeguard individuals and communities from third-party interference with their right to mental health. This may involve regulating industries contributing to climate change or implementing measures to shield populations from the psychological impacts of climate-related disasters.<sup>59</sup>

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<sup>57</sup> *Ibid.*

<sup>58</sup> United Nations. (n.d.). *The foundation of International Human Rights Law*. United Nations.

<sup>59</sup> Corvalan, C., Gray, B., Villalobos Prats, E., Sena, A., Hanna, F., & Campbell-Lendrum, D. (2022). Mental health and the global climate crisis. *Epidemiology and Psychiatric Sciences*, 31. <https://doi.org/10.1017/s2045796022000361>

The obligation to fulfill mandates that states adopt proactive measures to ensure the realization of the right to mental health.<sup>60</sup> In relation to climate change, this could encompass developing climate-responsive mental health services, integrating psychological health considerations into climate policies, conducting research on climate-related mental health impacts, fostering public awareness, and ensuring the accessibility and quality of mental health services.

For Iceland, these obligations translate into a need for comprehensive and proactive strategies. These may include systematic monitoring of the mental health impacts of environmental changes, developing targeted interventions for vulnerable populations, integrating mental health considerations into climate adaptation policies, equipping mental health services to address climate-related stressors, and promoting public awareness of the psychological dimensions of climate change.

Fulfilling these obligations requires a coordinated, multi-sectoral approach that recognizes the intricate connections between climate change, mental health, and human rights. It also necessitates ongoing evaluation and adaptation of policies to ensure their continued efficacy in the face of evolving climate challenges.

The subsequent chapters will examine Iceland's current efforts in meeting these obligations, the challenges encountered, and potential strategies for enhancing the protection of the right to mental health in the context of climate change. This analysis will provide valuable insights into the practical implementation of state obligations in this critical and emerging field of human rights and public health.

#### **Chapter 4: Theory**

This thesis employs Environmental Stress Theory, Place Attachment Theory and the Human Rights-Based Approach to establish a thoughtful lens for analysis.

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<sup>60</sup> *Ibid.*

## 4.1 Environmental Stress Theory

Environmental Stress Theory, described by psychologists Richard S. Lazarus and Judith Blackfield Cohen, provides a framework for understanding how environmental conditions can impact psychological well-being.

The researchers describe, “The concept of stress has often meant the environmental demands that require major adaptive responses from the individual. Alternatively, it has signified the response to such demands.”<sup>61</sup> This theory is particularly relevant in the context of climate change, as it helps explain the mechanisms through which environmental stressors can lead to mental health challenges and how they are handled.<sup>62</sup>

Components of Environmental Stress Theory include:

*Stressors*: Environmental conditions (these can cover a wide range of environments from global to personal, but for this purpose we will consider the local environment) that require some form of adaptation or coping. In the context of climate change in Iceland, these could refer to visible changes to the landscape, such as glacial retreat, extreme weather events such as increased avalanches or flood, or general uncertainties about an individual’s changing environment.

Stressors may be chronic, as is the case of gradual changes in climate or acute, in the form of extreme weather events. Each type of stress brings with it a unique set of challenges. Chronic stressors are shown to accumulate over time, potentially leading to despair and negative impacts on an individual's mental, and by extension, physical health.<sup>63</sup>

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<sup>61</sup> Lazarus, R.S., Cohen, J.B. (1977). Environmental Stress. *Human Behavior and Environment*. Springer, Boston, MA. [https://doi.org/10.1007/978-1-4684-0808-9\\_3](https://doi.org/10.1007/978-1-4684-0808-9_3)

<sup>62</sup> mvorganizing.org, A. (30 December 2023). *Eco-anxiety and environmental grief*. Environmental Psychology. <https://mvorganizing.org/eco-anxiety-and-environmental-grief-understanding-the-emotional-impact-of-climate-change/>

<sup>63</sup> Xue, S., Massazza, A., Akhter-Khan, S.C. *et al*. Mental health and psychosocial interventions in the context of climate change: a scoping review. *Mental Health Res* 3, 10 (2024).

*Appraisal*: This is a process by which individuals assess the significance of these stressors. This involves primary appraisal, such as considering if the stressor amounts to a threat, as well as secondary appraisal, such as considering if and how they can proceed given the stressor.

*Coping*: This involves the efforts an individual makes to deal with the environmental stresses at hand. These efforts may be problem-focused, an action directed outward to change the outcomes, or emotion-focused, an action based inward relating to how one handles the stress.

*Outcomes*: The psychological, physiological and behavioral result of exposure to environmental stressors and the effectiveness of the chosen coping strategies.<sup>64</sup>

In the context of climate change in Iceland, Environmental Stress Theory suggests that the visible and rapid environmental changes occurring in the country could act as significant stressors for the population of the country.<sup>65</sup> The theory helps explain why some individuals might experience anxiety, depression or other mental health challenges in response to these changes, while others might demonstrate resilience.<sup>66</sup>

Further, the theory emphasizes the importance of having a perceived control and coping resources in determining mental health outcomes. These factors are especially important when considering the global nature of climate change and the potential for individuals to feel helpless in the face of such large-scale environmental changes happening across the world at accelerating rates.<sup>67</sup>

## 4.2 Place Attachment Theory

Place Attachment Theory, developed primarily in the field of environmental psychology, explores the emotional bonds that individuals form with specific places. This theory is particularly relevant

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<sup>64</sup> Lazarus, R.S., Cohen, J.B. (1977)

<sup>65</sup> Xue, S., *et al.* Mental health and psychosocial interventions in the context of climate change: a scoping review.

<sup>66</sup> Gatersleben, B., & Griffin, I. (2017). Environmental stress. In *Handbook of environmental psychology and quality of life research* (pp. 469–485).

<sup>67</sup> Sumudu, A., & Andrea, S. (2019). *Human Rights and the Environment*, 373–380.  
<https://doi.org/10.4324/9781315193397>

in the context of Iceland, given the strong cultural connections many Icelanders have to their natural environment.

Key concepts in Place Attachment Theory include:

1. *Place identity*: The phenomenon of characteristics of a location contributing to an individual's sense of self.
2. *Place dependence*: The strong bond between an individual and a specific place, based on how well the place is able to satisfy the individuals needs and goals.
3. *Place Affect*: The emotional connections individuals have with the place.<sup>68</sup>

Within the context of climate change and mental health in Iceland, Place Attachment Theory offers several insights:

- The visible changes in Iceland's landscape, particularly glacier retreat, may not only represent physical changes but also challenges to individuals' sense of place and identity.
- Strong place attachment may be a source of emotional distress when a familiar environment changes, potentially creating or worsening mental health struggles.
- This theory goes beyond the potential physical threats of climate change and offers a consideration on how individuals may experience mental health harms due to climate change due to emotional connections to their environment.<sup>69</sup>

Strong place attachment may also be a source of resilience, motivating impacted individuals to take action to help combat climate change or bring awareness of the potential risks of environmental changes on mental wellbeing.<sup>70</sup> This also ties into Environmental Stress Theory as the chosen coping mechanisms and eventual outcomes can determine how people experience and move forward in the face of climate change.

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<sup>68</sup> Manzo, L., & Devine-Wright, P. (2021). *Place Attachment: Advances in Theory, Methods and Applications*. Routledge, Taylor & Francis Group. pp. 10-45

<sup>69</sup> Scannell, L., & Gifford, R. (2013). Personally relevant climate change. *Environment and Behavior*, 45(1), 60–85.

<sup>70</sup> Devine-Wright, P. (2013). Think global, ACT local? the relevance of place attachments and place identities in a climate changed world. *Global Environmental Change*, 23(1), 61–69



Place Attachment Theory addresses the direct environmental stressors of climate change on psychological health while also explaining the deeply felt emotional distress due to changing landscapes, climates and ecosystems.<sup>71</sup>

#### 4.3 Human Rights-Based Approach

The Human Rights Based Approach provides a framework for analyzing social issues through the lens of human rights principles. This approach is particularly relevant when examining the mental health impacts of climate change, as it centers these impacts within the context of state obligations and individual human rights.<sup>72</sup>

Important principles of the Human Rights-Based Approach include:

1. *Universality/Inalienability*: Human rights belong to all people everywhere without exception.
2. *Indivisibility*: Human rights are interrelated and interdependent. The right to mental health, for example, is closely tied to other rights such as the right to health and a healthy environment.
3. *Participation*: Human rights are inclusive and all people everywhere have the right to participate in the enjoyment of human rights.
4. *Accountability*: States are responsible for the promotion and protection of human rights.
5. *Equality*: All individuals are guaranteed equal respect to their human rights without discrimination on any grounds.<sup>73</sup>

Applied to the context of climate change and mental health in Iceland, the HRBA emphasizes:

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<sup>71</sup> *Ibid.*

<sup>72</sup> Mental Health. *Medical Human Rights Network*. (n.d.). <https://www.ifhhro.org/topics/mental-health/>

<sup>73</sup> Levy, S. R., Gopang, M., Ramírez, L., Bernardo, A. B., Ruck, M. D., & Sternisko, A. (2023). A human rights-based approach to climate injustices at the local, national, and international levels: Program and policy recommendations. *Social Issues and Policy Review*, 18(1), pp. 3–30.

- Iceland's obligation to secure the mental health of its population in the face of climate change to the best of its ability.
- The rights of individuals in the community to take an active part in decision making that involves climate change that may impact their mental health.
- The importance of addressing potential inequalities in how the mental health and wellbeing of different groups are impacted by climate change in Iceland.
- The need for accountability if the state is not meeting its obligations regarding the promotion and protection of climate-related mental health struggles in its communities.

The HRBA provides a framework for evaluating Iceland's policies and practices related to climate change and mental health. It emphasizes the importance of informing rights-holders (the population) of their protections and enforcing duty-bearers (the state) to meet their obligations.<sup>74</sup>

When human rights is placed at the center of discussion on climate change and mental health in Iceland, rights-holders are reminded they have the capacity to exercise their rights, formulate claims to hold duty-bearers accountable and seek redress for potential infringement of their rights,<sup>75</sup> which may become pertinent if livelihoods are lost and preventative governmental action was not taken.

#### 4.4 Integration of Theories

The integration of Environmental Stress Theory, Place Attachment Theory and the Human Rights-Based Approach provides a comprehensive analytical framework for examining the nexus of climate change and mental health in Iceland. This tripartite theoretical structure offers a multidimensional lens through which to explore this complex issue.

Environmental Stress Theory describes the mechanisms by which climate-induced changes may impact psychological well-being. Place Attachment Theory, particularly noteworthy in the

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<sup>74</sup> *Ibid.*

<sup>75</sup> Slente, C., & Winkler, T. (2013). (rep.). *A Human Rights Based Approach to Denmark's Development Cooperation* p.7.

Icelandic context, demonstrates the profound psychological implications of environmental changes for a population deeply connected to its landscape. The Human Rights-Based Approach describes the state's obligations in safeguarding mental health in the midst of environmental challenges.

This allows for a thoughtful analysis of the direct and indirect psychological stressors associated with climate change in Iceland, the convergence of cultural and environmental factors and the legal and ethical imperatives for mental health protection. By engaging this framework, the following chapters will methodically examine the interplay between climate change, mental health and human rights within Iceland's unique context, ensuring a comprehensive exploration of this issue.

## **Chapter 5: Methodology**

A mixed-methods approach will be used in the analysis of this paper in order to address the complex nature of the research questions revolving around climate change, mental health and human rights in the Icelandic context. This methodology was adopted due to the nature and scope of this thesis being ill-suited for examination through a singular lens or type of assessment.<sup>76</sup>

The quantitative component involves analysis of climate data and mental health indicators. This approach is needed to establish trends and potential connections between environmental changes and mental health outcomes in Iceland. By examining data over time, patterns may be identified that may not be apparent through casual observation.<sup>77</sup>

The qualitative component allows for the exploration of cultural contexts, policies and the complexities of human experiences through the analysis of academic literature and various reports from organizations researching climate change, mental health and related topics.<sup>78</sup> Policy documents will also be addressed as needed. This qualitative review is necessary for understanding

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<sup>76</sup> Langford, M. (2024). Mixed Methods in Human Rights Research in B.A. Andreassen, H.O. Sano and C. Methven O'Brien (eds.), *Research Methods in Human Rights*, pp. 1-7.

<sup>77</sup> Brown, C. J., et al. (2011). Quantitative approaches in climate change ecology. *Global Change Biology*, 17(12), pp. 3697–3702. <https://doi.org/10.1111/j.1365-2486.2011.02531.x>

<sup>78</sup> Pelzang, R., & Hutchinson, A. M. (2018). Establishing Cultural Integrity in qualitative research. *International Journal of Qualitative Methods*, 17(1), p. 1, 7. <https://doi.org/10.1177/1609406917749702>

the nuances of these issues – aspects that may not be quantifiable in numbers. The combination of these methods is necessary for the analysis of this research paper as complex social issues require multifaceted approaches.<sup>79</sup>

A singular case study was employed in this research for the purpose of delving deeper into the nuanced aspects on climate change and mental health in a singular context – Iceland. This was chosen not only due to the country’s unique and dynamic profile, but also because it stands as an extreme climactic and cultural example. This focused approach is motivated by the belief that a detailed case study may be able to provide insights applicable to other contexts on the topic of climate change impacts on mental health.<sup>80</sup>

Finally, this methodology was employed with the intention of allowing for broader application of the findings with the hope to bridge a gap between theory and practice.

### 5.1 Data Collection

Quantitative data has been collected in a variety of ways. Climate data including the current state, historical context and future projects have been collected primarily from The Icelandic Meteorological Office and other international climate databases. This includes temperature and precipitation trends as well as data on glacial retreat. Data on mental health has been collected from the Icelandic Directorate of Health and other national health surveys and attempt to explain the landscape of mental health and psychological health access in Iceland. Demographic data including population, age distribution and economic indicators have been collected primarily from Statistics Iceland to give the reader an understanding of the country at the center of this research.

Qualitative data includes document analysis and the review of relevant academic literature. Relevant policy documents and reports related to climate change, mental health and human rights in Iceland have been analyzed in this study. An exhaustive review of academic literature from a

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<sup>79</sup> *Qualitative research*. UK Research and Innovation. (2022). <https://www.ukri.org/who-we-are/esrc/what-is-social-science/qualitative-research/>

<sup>80</sup> George, A. L., & Bennett, A. (2007). *Case studies and theory development in the Social Sciences*. MIT Press. pp. 24-28. ISBN 0-262-07257-2.

variety of sources has been included in this research. This includes studies on the mental health impacts of climate change, analyses of human rights in this context and research on the chosen theories and their relevance to environmental change and mental health. Articles from reputable media sources have also been cited sparingly and with caution in this work.

## 5.2 Data Analysis

The quantitative analysis can be summed up in three steps: summarizing the main points of the climate and health data, identifying patterns in the data and demonstrating changes over time and finally, exploring the potential relationships between the climate variable and mental health outcomes.

The qualitative analysis involved gaining familiarization with the chosen documents and literature before identifying how the gained knowledge applies to either mental health, climate change and/or human rights. The next vital step was determining how this knowledge may apply to the case of Iceland and their implications on the chosen research questions.<sup>81</sup>

Finally, the most vital aspect of this research involved the application of the chosen theoretical framework which was laid out in Chapter 4 to interpret the gathered quantitative and qualitative information. To this end, it is necessary to examine how these findings align with Environmental Stress Theory and Place Attachment Theory while viewing the results through the lens of the Human Rights-Based Approach to pinpoint potential human rights implications related to climate change in Iceland.<sup>82</sup>

## 5.3 Ethical Considerations and Limitations

While this study refrains from direct human subject involvement, ethical considerations remain vital. The research prioritizes data from governmental sources, ensuring reliability. Rigorous attention has been paid to the interpretation of findings to avoid overgeneralization or

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<sup>81</sup> *Ibid.* pp. 84-85.

<sup>82</sup> Langford, M. (2024). *Mixed Methods in Human Rights Research*, pp. 10-11.

sensationalism. Chapter 1 delineates the study's delimitations, providing a transparent framework for the research objectives.

The methodology acknowledges certain limitations inherent to its academic scope. The absence of primary data collection methods, such as interviews or focus groups, constrains the capture of personal narratives.<sup>83</sup>

Given the multifaceted nature of both mental health and climate change, this thesis necessarily focuses on key factors rather than exhaustively detailing every potential variable. This selective approach allows for a more focused and in-depth analysis within the confines of the research scope.

While centered on Iceland, the study exercises caution in extrapolating findings to other contexts. Despite shared cultural, climatic, historical, political and environmental factors among Nordic nations, this research does not presume to address knowledge gaps in any other settings.

## **Chapter 6: Analysis**

This chapter presents the findings of the research and discusses their implications in relation to the research questions and theoretical framework.

### 6.1 Climate Change Trends in Iceland

The analyzed data has shown a number of severe impacts on the climate in Iceland due to global warming. These factors include increased precipitation and a rise in temperatures, particularly in the colder winter months. Further, the extreme glacial retreat seen in Iceland is causing further issues with increased flooding in some areas as well as higher risk of avalanches and landslides in other regions.

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<sup>83</sup> Knott, E., Rao, A.H., Summers, K. et al. (2022) Interviews in the social sciences. *Nat Rev Methods Primers* 2, 73, pp. 11-12. <https://doi.org/10.1038/s43586-022-00150-6>

Looking towards the sea, the changes are just as apparent with warming temperatures affecting the behavior of fish in and arounds Iceland's waters. Ocean acidification and rising sea temperatures are further exacerbating issues already rife in Icelandic waters. Together, these issues on the land and in the sea are putting Iceland's agricultural and aquacultural workers in a precarious situation of potentially facing emotional distress or economic losses due to the changing climate. These trends align with global climate change patterns but are particularly pronounced in Iceland due to its Arctic and sub-Arctic location.

The visibility of these changes, especially glacier retreat, creates a unique context for examining their psychological impacts in the context of Environmental Stress Theory and Place Attachment Theory.

## 6.2 Mental Health Trends in Iceland

The research reveals that mental health concerns are prevalent among a considerable segment of Iceland's population, mirroring trends observed globally. The notable climatic shifts occurring in Iceland are likely inducing environmental stress for many individuals, particularly given the culture's deep-rooted connection to its natural surroundings. This phenomenon aligns closely with Place Attachment Theory, which posits that people often form strong emotional bonds with their environments.

The intersection of Iceland's changing climate, its population's mental health and the strong cultural ties to the environment presents a unique and complex situation. It underscores the importance of considering psychological factors when addressing climate change impacts in relation to human rights.

Due to this, it is also a vital area for the appreciation of the Human Rights-Based Approach which would center the protection and promotion of human rights in the conversation around climate change and mental health in Iceland.

### 6.3 Linking Climate Change and Mental Health

While direct causal relationships are difficult to establish, several patterns emerge when examining climate and mental health data in parallel. The acceleration of climate change impacts coincides with increases in anxiety and depression diagnoses. While this correlation does not imply causation, it suggests a potential relationship worthy of further investigation.

Changes in seasonal weather patterns, particularly milder but wetter winters, align with shifts in seasonal mental health trends. This could indicate a complex interaction between climate change, seasonal affective disorder and overall mental well-being.

Those in climate-sensitive industries are also at higher risk of emotional damages due to the changing climate as the impact of the loss of livelihood is one major visible cause related to hardship and emotional distress.

Younger generations, who are more likely to be concerned about long-term climate impacts, also show higher rates of anxiety and stress. This aligns with global trends of "eco-anxiety" among youth.

### 6.4 Policy Analysis

Iceland's Climate Action Plan 2018-2030 focuses primarily on mitigation efforts and adaptation of infrastructure. Mental health is not explicitly addressed, representing a significant gap as this is the chief document regarding climate change in Iceland. While Iceland has a strong human rights record, the intersection of climate change and the right to mental health is not directly addressed in national policies or action plans.

Additionally, the National Mental Health Policy and Action Plan 2016-2020 aimed to improve access to mental health services but does not specifically consider climate change-related mental health impacts. Ultimately, Iceland is still grappling with bringing care to its population in a timely



manner regardless of urban or rural location and due to understaffing, among other issues, is currently falling short of their goals in this regard.

In line with this, Iceland's environmental policies often recognize the cultural significance of their unique landscapes but do not explicitly link environmental protection to mental health concerns.

## 6.5 Application of Theoretical Framework

### 6.5.1 Environmental Stress Theory

The visible environmental changes in Iceland, particularly glacial retreat and the increased instance of extreme winter weather patterns, have the potential to act as stressors to portions of the population which would require some degree of psychological adaptation. Environmental stress could, in part, account for the increased rates of anxiety and depression, although other factors undoubtedly play a role so this should not be over-stated and more targeted study is needed to identify the scale.

Regional variations in mental health outcomes are interesting and could suggest that proximity to environmental changes may influence stress levels. However, it is a global trend that mental health access is more difficult to procure in more rural as opposed to urban areas. Incidentally, agriculture and a majority of other climate-sensitive jobs also tend to be located in more rural areas however this should not be read into as demonstrating causation. This fact does, however, demonstrate a common barrier to care (rural living) disproportionately impacting workers in certain climate-related industries.

Environmental Stress Theory provides a valuable framework for understanding the psychological impacts of climate change in Iceland. This theory, which examines how environmental conditions can affect mental well-being, is particularly relevant given the rapid and visible environmental changes occurring in Iceland due to global warming.

Through Environmental Stress Theory environmental factors are identified as stressors which require the individual to appraise the issue and adapt psychologically and/or behaviorally.

Primary appraisal refers to an individual's mental evaluation of a given environmental stressor. In the context of Iceland, the retreat of glaciers and changes in weather patterns are likely to serve as the most visible and tangible front-line changes environmental changes. Icelanders may appraise these changes as threatening to their way of life, cultural identity or future well-being. The primary appraisal of these stressors can vary among individuals, with some perceiving them as severe threats and others as momentary challenges.

Secondary appraisal involves assessing one's ability to cope with the identified stressor. In Iceland, factors such as access to information, community support and personal resilience can influence this process. For instance, an Icelander living in a flood-prone area may assess their ability to adapt to potential challenges based on their resources and governmental preparedness.

Coping mechanisms are also incredibly important in managing environmental stressors according to Environmental Stress Theory. This can involve a singular coping mechanism for a multi-pronged approach of the following techniques:

*Problem-focused coping* involves managing one's stress by taking action against the cause of the stress. This can entail community and political involvement to better address these problems or enacting change at a personal level by making more climate-conscious choices.

*Emotion-focused coping* involves inward adaptation to the external stressors brought on by climate change. This may range from seeking guidance and support from one's local community to reinforcing cultural ties to the landscape despite the distressing changes.

*Meaning-focused coping* may involve reframing climate change challenges as opportunities for individual or community action which may be innovative, political or both.

Iceland's small and tight-knit community is key for the social support in moderating stress, especially when it is due to factors affecting the entire – or large swaths of – the community. This

can serve as a safeguard for the psychological impacts of climate change, especially if climate change and mental health education is being made accessible to members of that community.

Environmental Stress Theory also highlights the need for control when battling environmental stressors. This may be achieved through educational campaigns aimed at informing residents of actions they may take to support themselves and their communities in the face of anthropogenic climate change. Climate change is of international concern as it touches every corner of the globe in different ways and to varying degrees, which may make the problem feel insurmountable and unpredictable, causing greater stress.

This may be assisted by community members urging their representatives at local, national and international levels to bring these issues to broader stages. Additionally, using these platforms to share knowledge, techniques and concerns to wider audiences may offer Icelanders the feeling that they are doing everything they can to combat the issue as a small, isolated nation.

Given these negative impacts, positive outcomes may still be achievable such as increased political engagement and community involvement, an increased focus on more mindful consumption and climate-related innovations and research that may prove valuable on the global scale.

Applying Environmental Stress Theory highlights the complexities between climate change and mental health in Iceland, further highlighting the need for multifaceted approaches to these challenges at the individual and community levels. This allows for policy makers, mental health professionals and others to better understand the inherent risk and potential paths forward when dealing with the situation of mental health in the era of anthropogenic climate change in Iceland – not only the physical impacts, but the psychological ones as well.

### 6.5.2 Place Attachment Theory

Place Attachment Theory highlights the potential psychological response to the changing landscape for the Icelandic peoples. As a country with strong cultural ties to the land due to

generations upon generations of historical resilience in the face of the country's harsh and largely uninhabitable landscape – Iceland provides a unique backdrop.

In Iceland, place attachment is deeply ingrained in the national identity. The country's dramatic landscapes, with glaciers, volcanoes, hot springs and rugged coastlines, have shaped Icelandic culture, literature and art from the earliest stages of its settlement. This strong connection to the land goes beyond mere appreciation of natural beauty; it encompasses a sense of belonging and identity that has been forged over generations of resilience.

Visible changes to the landscape of Iceland in the form of glacial retreat and changing lands due to increased flooding, land- and rockslides may cause psychological harms to those who have the Icelandic landscape intrinsically tied to their culture and personal or national identity. Disruption to this idea of self when the land is drastically altered lends itself to the convergence of Place Attachment Theory, climate change and mental health in Iceland.

Concerns to place attachment in the face of climate change in Iceland may have the following effects. The *disruption of place identity* arises when the comfort of the closely-held natural landscape shifts due to climactic factors. This is especially true of the more visible impacts such as glacier loss and land loss due to flooding.

However, in the case of workers in agriculture and aquaculture related industries, despair may also arise from feelings of defeat if an individual's livelihood (often a generational venture) is threatened due to changes of climate and landscape. This is an example of *disruption to place dependence* as noted in Place Attachment Theory.

Climate change can also be seen as a *threat to social bonds* as described as integral to Place Attachment Theory. If the above mentioned agriculture and aquaculture livelihoods are lost, this may lead to flight from the rural, close-knot countryside communities which dot the island into the

larger settlements such as Reykjavík in the southwest or Selfoss in the south of the country.<sup>84</sup> This may be seen as a loss to rural identity and character.

Further, tourism is a major industry in the Icelandic economy. While changes to the climate and landscape may alter how the population views its country, this may also impact perceptions of visitors and potential visitors, potentially leading to economic shifts.

As with Environmental Stress Theory, Place Attachment Theory may also be seen as a source of resilience and ultimately offer some positive outcomes. The emotional connections individuals tend to feel with their environments may inspire community or political action in the face of climate change. Considering these are not concerns that are only impacting populations in countries on the other side of the planet, it may take facing a personal risk or cultural loss to motivate some to local or global action.

Considering the landscape is a major point of national pride in Iceland, climate change is a threat to the personal identities of the population as well as and national identity itself. The engagement of Icelanders, especially members of the youth, in political, climate-related activism can be seen as a symbol of strong place attachment and, ultimately, a positive outcome to it.

It is key for place attachment in Iceland to be adaptive in the face of anthropogenic climate change. Some impacts of global warming are already irreversible, such as the loss of iconic Icelandic glaciers. However, it is vital for populations to strive to find and evolve their place attachment to the changing landscapes. This can be achieved through the coping mechanism outlined in Environmental Stress Theory, as well as a rash of other potential adaptation methods.

By recognizing the long-standing and deeply held connections the Icelandic population feels to its environmental, Place Attachment Theory provides insights into the psychological dimensions of climate change in the country.

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<sup>84</sup> Bjarnason, T., Stockdale, A., Shuttleworth, I., Eimermann, M., & Shucksmith, M. (2021). At the intersection of urbanisation and counterurbanisation in rural space: Microubanisation in Northern Iceland. *Journal of Rural Studies*, 87, 404–414.

### 6.5.3 Human Rights-Based Approach

Situating human rights at the center of the topic of the impact of climate change on mental wellbeing in Iceland is crucial. While Iceland holds a solid human rights record, mental health has not yet been a focus for attention or research in the study of global warming policy or advocacy in the country. By considering this topic through the lens of the HRBA, climate change is not only seen as an environmental issue but further, as a human rights issue.

Considering the lack of interplay between mental health advocacy and climate change measures, this could be seen as the state of Iceland coming up short on their obligations to promote and protect mental health in the face of anthropogenic climate change. However, this also provides an opportunity for the country to reevaluate and overhaul their mental health access overall as it has been plagued by concerns of long wait times and gaps in care.

The Human Rights-Based Approach (HRBA) offers a valuable framework for examining the impacts of climate change in Iceland, particularly in relation to mental health. This approach highlights the importance of joining human rights principles to climate change policies, ensuring that the rights, and by extension – dignity) of individuals are at the forefront of climate-related decision-making.

Further, education on the intersection between mental health and climate change could offer rights holders increased awareness of their risks, their rights and potentially urge them to take action to combat climate change in the country on a personal, familial and community level. This further reinforces the human rights concept that all rights bearers have a duty to respect the human rights of others as well.

In examining the intersection of climate change and the right to mental health in Iceland, several critical considerations emerge. The Human Rights-Based Approach (HRBA) positions the right to mental health, as encompassed within the broader right to health, at the forefront of discourse surrounding climate change in Iceland. This framework should serve as a starting point for policy

formulation aimed at securing the mental well-being of the population in the face of climate change.

Accountability and transparency are also key and would involve the government of Iceland not only taking measures to address the concerns of its population, but also holding itself responsible for monitoring the progress of those measures so that may be deemed effective within reasonable timeframes – and doing so in a way that is honest with the public.

It is also vital for Iceland to establish mechanisms for individuals or communities to seek justice if they believe their right to mental health has been compromised due to inadequate climate change responses.

Long-term realistic realization of guaranteeing certain rights is important to this topic. The solution to climate change issues is not as simple as beginning to do one thing or ceasing to do another. The same is true of mental health challenges. This is why implementing progressive realization of these rights is not only acceptable, but paramount. Progress over time through the methods stated above is a vital first step towards guaranteeing the rights of the Icelandic population in this context.

## **Chapter 7: Conclusion**

This final chapter will display the key findings of the research, discuss their meaning and offer recommendations for personal action, policy changes and suggestions for future research.

### **7.1 Findings**

There are numerous environmental changes taking place in Iceland due to anthropogenic climate change. These include rising air and sea temperatures, increased precipitation, ocean acidification and increased occurrence of extreme weather events. Further, visible changes have occurred in the landscape due to these changes including the irreparable retreat of glacier, increased avalanches and floods changing the visuals of the land and shifts in the standard seasonal cycles.

Climate change in Iceland, as in many parts of the world, seems to be creating complicated psychological problems for its population. This ranges from the potential for loss of livelihood for those working in agricultural sectors, disruption to an individual's personal or national identity for those who link the Icelandic landscape with their culture and general uncertainties about the future. Environmental Stress Theory indicates how these factors may trigger psychological stress in individuals in the context of climate change.

Some of these stressors may be linked to Iceland's unique connection to its natural environment – one which has imbued its population with resilience over the centuries which is still palpable in the country today. While this connection is undoubtedly seen as a strength among its people and something that binds their community, it also leaves the population vulnerable to deep emotional stress as demonstrated by Place Attachment Theory.

The sheer visibility of these climactic changes lend themselves both to Environmental Stress Theory in that these stresses may be felt even deeper due to the changes being so apparent, but also Place Attachment Theory due to the changes in visible environment changing the cherished landscapes in a way that causes concern and distress.

Further, the Human Rights-Based Approach offers a reframing of how Iceland can proceed with both climate change and mental health policy with human rights as a cornerstone. This also highlights other integral aspects such as the interdependency of rights and transparency in governmental decision-making.

Although Iceland holds a good track record on human rights, the governmental policies lack integration between environmental stressors linked to climate change and the securing of the right to mental health. There are several possible remedies to this gap which will be discussed later in the chapter. Overall, integration and interdisciplinary tactics would be highly valuable in problem solving in this area.

There has thus far been virtually no attempt made to join climate change policy and mental health policy in Iceland. This is to the detriment of current and future generations. These gaps must be



identified and filled to allow for the full realization of the right to mental health in the era of anthropogenic climate change.

### 7.1.2 Brief Summary of Theoretical Insights

- Environmental Stress Theory illuminates the potential psychological impacts of Iceland's changing climate and landscape. This perspective underscores how alterations in the physical environment may induce stress and compromise mental well-being among the population.
- Place Attachment Theory offers a nuanced understanding of the psychological implications of climate change in Iceland. It suggests that the strong cultural connection Icelanders have with their landscape may exacerbate the psychological distress associated with environmental changes. Conversely, this deep-rooted attachment may also serve as a motivating factor, potentially inspiring proactive engagement in climate change mitigation efforts to preserve the cherished landscape.
- The Human Rights-Based Approach offers a nuanced framework for addressing the mental health implications of climate change, positioning human rights at the forefront of the issue. This perspective advocates for an interdisciplinary strategy that integrates human rights principles into both climate and mental health discussions. This approach ensures that the psychological well-being of individuals remains a key consideration in climate change mitigation and adaptation efforts, promoting a more holistic response to environmental changes.

## 7.2 Implications for the Right to Mental Health

This thesis has strived to explain how climate change may be impacting the right to mental health in Iceland. The analysis has found that there are visible and detrimental climate change impacts occurring in Iceland, that these factors may have a detrimental effect on mental health for the population of Iceland and that there are gaps in the promotion and protection of mental health in by duty-bearers considering these factors.

This presents a crucial opportunity for the Icelandic government to refocus the conversation on climate change within its borders to account for the mental health concerns of its population, as these detrimental effects are only poised to increase in frequency and severity as the climate continues to change at alarming rates.

Further, as a duty-bearer, Iceland is required to enact measures with the goal of ensuring timely and effective access to mental health care that is understanding of the implication climate change may have on psychological wellbeing. This may be progressively realized, but it must be realized.

### 7.3 Recommendations

1. Iceland should develop a comprehensive national strategy that is mindful of the mental health implications of climate change within its borders. This strategy should include both adaptation and mitigation efforts. This strategy should highlight climate resilience and mental wellbeing as inextricably linked and depending on one another.
2. Mental health services in Iceland should be enhanced to 1) reach their own stated goals for reasonable wait times and 2) include education on the psychological impact of climate change on mental health.
3. Engage Iceland's strong social networks to build resilient communities through outreach, education and motivation towards activism and personal responsibility.
4. Promote research on specific climate related concerns and their potential psychological impacts on individuals in the population. Broad research can point out trends and offer suggestions, but targeted research can provide more localized solutions to specific problems.
5. Produce human rights-based climate education, starting from early schooling to encourage young people to take an active interest in securing the wellbeing of their communities and landscape for the future.
6. Iceland should strive to act as a world leader in the promotion and protection of psychological wellbeing in the era of anthropogenic climate change through advocacy, collaborative research and education.

## 7.4 Future Research

This study suggests several areas for further research which lie outside the scope of this thesis, including:

- Targeted research on specific economic-related climate change impacts and how they may increase eco-anxieties in climate-sensitive industries.
- Long-term studies to identify generational mental health challenges in the face of accelerating climate change in Iceland.
- Comparative studies between other island nations, especially ones with vastly different socioeconomical, cultural and political situations than Iceland to inform how these issues are being handled in differing societies.
- Comparative studies between Iceland's closest cultural counterparts, to identify best practices between these peers to see if results may also apply to the Icelandic situation.

## 7.5 Concluding Remarks

Climate change is felt in every corner of the globe to varying degrees and often involving vastly different struggles. This thesis has attempted to demonstrate that climate change poses significant challenges to mental health in Iceland – a topic that has gone largely unaddressed in the academic and political spheres.

The realization of this will require a multidisciplinary, coordinated human rights-based approach. By taking the necessary steps to integrate human rights into both its climate change and mental health policy, Iceland has an opportunity to safeguard its population while also acting as a role model for the governments around the world facing their own climate related mental health challenges.

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