

# **The effects of the Covid-19 crisis on climate change mitigation and adaptation measures: The case study of Tyrolian holiday hotels**

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Bachelor of Science in

International Management

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## **Affidavit**

I hereby affirm that this Bachelor's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

The thesis was not submitted in the same or in a substantially similar version, not even partially, to another examination board and was not published elsewhere.

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Date

## **Abstract**

Climate change is increasingly gaining importance in the literature and media. Due to the fact that alpine tourism regions are very vulnerable to climate change and the resulting temperature changes, it is important to raise awareness of possible mitigation and adaptation measures to counteract the problem. In addition to climate change issues, the tourism industry was hit particularly hard by the Covid-19 pandemic in 2020. This study investigated the impact of the Covid-19 pandemic on climate change mitigation and adaptation measures in the hotel industry. In addition, this thesis examined how hotel owners work against climate change during and after the Covid-19 crisis. The area studied was the tourism destination Tyrol in Austria. Hotel owners were approached to gather information on how their establishments were affected by the pandemic and what the biggest challenges were. Furthermore, participants were asked to give information to what degree they perceive climate change, and if so, what adaptation and mitigation strategies are being implemented to address the impacts and causes of the issue. Finally, respondents were questioned about their plans for further climate action in the next 2-3 years and what they think is important to be resilient for the future.

This thesis followed a qualitative research approach, where semi-structured interviews were conducted with 10 hotel owners of the destination. The hoteliers were chosen according to the hotel-star category and their availability. It was assumed that the Covid-19 crisis affected all hotels equally in terms of lack of perspective, liquidity problems and employee retainment. Furthermore, the researcher assumed that large hotels implement more measures to counteract climate change due to greater financial security and the increased investment possibilities. The interviews were carried out in spring 2021 and data processing was completed by analyzing the main patterns obtained from the interview transcripts. The interviews revealed some discrepancy between the participants. Whilst the majority of participants attached great importance to mitigating and adapting to climate change, some hoteliers from small hotels indicated that they are only concerned about their revenue. Nevertheless, the participants on the whole demonstrated that their establishments were heavily affected by the Covid-19 crisis.

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## List of Abbreviations

<b>BAG</b>	Federal Office of Public Health (Bundesamt für Gesundheit)
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>COVID-19</b>	Coronavirus disease 19
<b>EIA</b>	U.S. Energy Information Administration
<b>GHGs</b>	Greenhouse Gases
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>NGO</b>	Non-governmental Organization
<b>SARS</b>	Severe Acute Respiratory Syndrome
<b>SARS-CoV-2</b>	Severe acute respiratory syndrome coronavirus 2
<b>SDGs</b>	Sustainable Development Goals
<b>UNWTO</b>	The World Tourism Organization
<b>WHO</b>	World Health Organization
<b>WKO</b>	Austrian Economic Chamber (Wirtschaftskammer Österreich)
<b>WWF</b>	World Wide Fund for Nature (NGO)
<b>ZAMG</b>	Central Institution for Methodology and Geodynamics Austria (Zentralanstalt für Meteorologie und Geodynamik)





## 1 Introduction

Austria is an attractive tourist destination with high development potential. Tourism is the action of people travelling voluntarily away from their home for reasons like health, visiting friends or family, leisure or business (Gössling, Hall, & Scott, 2009). The dependence of the Austrian economy on tourism is well known and the competition is intense. With around 152 million bed nights in 2019, Austria is one of the leading countries in Europe in terms of the number of tourists per inhabitant (Statistik Austria, 2020). Tourism plays a key role in Austria's economy in terms of income generation, employment and economic growth. Austria presents itself among all industrial nations as the one with the largest share of tourism within the national economy. Austria's tourism industry accounts for around 7,3% of the GDP in 2019, which are approximately 38.1 billion euros (BMLRT, 2021). The World Economic Forum selects the best tourist destinations annually and evaluates the attractiveness and development potential of around 140 countries. Austria was put on the twelfth place in this ranking (Gahleitner, 2020).

On the one hand, tourism is considered to be one of the main polluters, due to flights and cruise ships (Brasseur, Jacob, & Schuck-Zöller, 2017). On the other hand, tourism is also affected by the climate change, which will be evaluated in this thesis. Hence, tourism is both responsible and affected. Tourism impacts climate change, due to the greenhouse gas emissions that result from the transport and hospitality industry. It is assumed that tourism is responsible for around 8% of global greenhouse emissions (Lenzen, et al., 2018). These greenhouse gases are one of the main causes for climate change. Many experts increasingly perceive climate change as the most serious global environmental problem (Trawöger, 2014). Lenzen et al. (2018) claims that the majority of the footprint is caused in and by high-income countries.

In 2020, the climate change crisis and the thereby arising threats for the tourism industry were put in the background for a short time. A new disease similar to SARS (Severe acute respiratory syndrome) was discovered in Wuhan, a city in China which spread unrestricted around the globe within a short period of time (McMullen, 2021). The newly discovered coronavirus dominated the whole globe after the major outbreak. In early 2020, the Covid-19 pandemic reached

Austria (Weber & Wille, 2020). The new type of coronavirus was first reported in December 2019 in China. Back then it was not foreseeable how rapidly the Covid-19 pandemic will spread, and which global effects can occur. In March 2020 the first lockdown and the new public health measures to contain the coronavirus were imposed by the Austrian government (Baumgartner, et al., 2020). If the tourism sector values and whether it applies the newly implemented measures will be analysed in this thesis. The economic consequences of the Covid-19 crisis resulted in the worst recession since the end of the Second World War for the Austrian economy in 2020.

A very interesting side effect of the Covid-19 crisis could be seen at the very beginning of the pandemic. Due to lockdowns coming into force worldwide, the global economic activity faced a sharp decline. In particular the travel and tourism sector experienced a major shock. The decline in air-, road-, and rail transportation as well as travel led to a decline in air pollution and greenhouse gas emissions (Helm, 2020). These short-time reactions prove that GDP (Gross domestic product) and pollution are correlated. Researchers believe that, even though governments could not focus on environmental priorities as much because of the pandemic, in the short term the environment had some time to recover due to the decline in economic activity (Helm, 2020).

It has already been discovered and evaluated that climate change affects tourism, especially the winter sport tourism industry (Koenig & Abegg, 1997). The long-term survival of hotels and ropeway companies in the Alps is only assured if there are suitable snow conditions. This means that there is frequent and regular snowfall with an appropriate temperature. Due to climate change these crucial factors cannot be guaranteed (Elsasser & Bürki, 2002). However, there has been little to no research about the measures regarding the impact of climate change on tourism and how the industry accepts and implements them. It is vital to understand the people's perception towards the measures, which are in place in order to implement measures which are actionable as well as realistic in order to meet goals and to slow down climate change. This will be analysed in depth using semi structured expert interviews.

First of all, it is important to define climate, as it is often mistaken for weather. The difference is that weather can change from day-to-day and climate is a

long-term condition. Therefore, climate change can be defined as the long-term shift of temperature and weather patterns globally (National Geographic, 2019). In addition, one must define what tourism is. Tourism can be defined as the movement of people to a country or place outside their habitual environment for leisure or business purposes longer than one night (Walton, 2012). Lastly, as this thesis will also analyze the perception of Covid-19 measures the respective definition is also of importance. Thus, according to the WHO the Covid-19 virus can be defined as a very infectious disease-causing respiratory illness triggered by a newly discovered coronavirus (WHO, 2021).

Correspondingly the following questions arise: How does the hotel tourism sector react towards the Covid-19 crisis? Are the containment measures to fight the COVID-19 pandemic, which were introduced by the government accepted within the industry? Which measures do the hotels see as reasonable to implement? To what extent does the hotel industry contribute to counteract the climate crisis? These guiding questions lead to the central research question of this thesis, which can be determined as:

To what extent are climate change mitigation and adaptation measures in the hotel industry affected by the Covid-19 crisis, and how do hotel owners work against climate change during and after the Covid-19 crisis?

This thesis will focus on the acceptance and implementation of the climate change mitigation and adaptation as well as Covid-19 measures by the Austrian hotel industry. Due to the fact that hotels were affected by the governmental measures of the Covid-19 crisis, it will be interesting to obtain information how it affected the hotels in particular and also if it affected the implementation of climate change mitigation and adaptation measures. The goal is to analyze the behavior of different hotels regarding the two major crises and in what way they value and accept different measures in order to contain them.

To level the ground for the analysis, the topic will be discussed with hotel owners by using semi-structured expert interviews. This will provide the basis for answering the research question and providing recommendations for future research.

The following sub-research questions will guide the research:

1. *To what extent did Covid-19 affect the holiday hotel industry and what are the greatest challenges?*
2. *Which Covid-19 measures are seen as useful? Where can improvements be made?*
3. *Which climate change measures are applied and implemented by hotel owners?*
4. *Did the Covid-19 crisis affect hotel's mitigation and adaptation strategies positively or negatively?*
5. *How important are support, and subsidies offered by public authorities to hotel owners when implementing climate change measures?*
6. *Which climate change measures will be implemented in the next 2-3 years?*
7. *How can a holiday hotel position itself resiliently for the future?*

This thesis supports the hypothesis that large hotels implement more measures against climate change than small hotels due to greater financial security and thus increased investment possibilities.

The second hypothesis of the thesis is that the Covid-19 crisis affects all hotels equally in terms of lack of perspective, liquidity problems and employee retainment.

## **2 Literature Review**

### **2.1 Hotel industry**

A hotel is an establishment which serves travelers with a place to stay overnight for a fee (Morrison & Conway, 2017). It is necessary to meet certain requirements to be allowed to be a hotel. On the one hand, at least 20 guest rooms must be offered. On the other hand, it is mandatory that the majority of the hotel is equipped with its own bathroom and toilet. Furthermore, the establishment needs to have a hotel reception and a restaurant (Deutscher Tourismus Verband, n.D.).

In general, the features and services vary significantly among hotels. Usually, hotels aim to attract a specific type of customer through the pricing model and services offered (Bailey & Ball, 2006). Some types of hotels include Airport hotels, Holiday hotels, Luxury hotels or Boutique hotels. The term holiday hotel will be explained in depth in chapter 2.1.2 as this thesis focuses on the Tyrolian holiday hotel industry.

The term hotel industry describes the section of the service industry that works with lodging and guest accommodation (Revfine, 2021). Especially in Austria, the hotel industry is one of the most important pillars of the country's tourism industry. In 2019 hotels, inns and guesthouses in Austria were able to generate a sales revenue totaling approximately 10 billion euros (Mohr, 2021).

In 2019/2020, 68.400 accommodation establishments were recorded in Austria (Statistik Austria, 2021).

#### **2.1.1 Hotel classification in Austria**

The classification of hotels into categories is carried out by the Chamber of Commerce Professional Group of the Hotel Industry. The categories range from 1 to 5 stars. In Austria, the hotel classification is a standardized system valid throughout the country, used to classify hotels according to their quality. The overall appearance and state of maintenance as well as the impeccable cleanliness and hygiene of an establishment are basic requirements for inclusion in the Austrian Hotel Classification. The rating system serves guests

and travel companies as a reliable orientation aid regarding the quality of a hotel and accommodation offers (WKO, 2019).

3 Star rating	4 Star rating	5 Star rating
<ul style="list-style-type: none"> <li>• Reception service: 10 hours</li> <li>• Seating area in the reception area</li> <li>• Luggage service on request and secured luggage storage for guests</li> <li>• Drinks offered in the room</li> <li>• Hair dryer, dressing mirror, suitcase rack</li> <li>• Bilingual hotel website</li> </ul>	<ul style="list-style-type: none"> <li>• Reception service: 16 hours</li> <li>• Lobby with seating and beverage service, hotel bar or lounge area</li> <li>• Luggage service and secured luggage storage for guests</li> <li>• Minibar or 24 hours room service for drinks</li> <li>• comfortable seating with side table</li> <li>• International TV channels</li> </ul>	<ul style="list-style-type: none"> <li>• Reception service: 24 hours</li> <li>• Personalized welcome with fresh flowers or gift in the room, concierge shuttle service or limousine service</li> <li>• Luggage service at arrival</li> <li>• Mini-bar and 24-hour room service food and beverages</li> <li>• Internet router on request in the room</li> <li>• Safe in the room</li> <li>• Ironing service (within one hour), shoe shine and sewing service</li> </ul>

Figure 1: An excerpt from the Austrian criteria catalog (Hotrec, n.D.)

Figure 1 is a visualized excerpt of the Austrian hotel star criteria catalog of the Hotelstars Union. The joint hotel classification is a dynamic system whose criteria and guidelines are regularly reviewed by experts. According to the guests' expectations the criteria catalog is always being updated and developed further. As this thesis is engaged with the data collection of hotels with a 3-to-5-star classification, figure 1 shows the criteria to belong to one of these star categories. As the 5-star hotels are the most luxurious ones, the hotel must provide appropriate services to meet the desires of the guest. In contrast, a 4-star hotel needs to fulfill less criteria but still needs to provide high quality service. In a three-star hotel, there are significantly fewer criteria to meet in order to run a hotel in this category. The hotel star criteria are the same for business and holiday hotels in Austria. The difference between those hotel types will be explained below.

### 2.1.2 Difference between a holiday hotel and a business hotel

As the case study of the thesis targets the holiday hotels within Tyrol in Austria, it is essential to define the differences between a holiday hotel and a business hotel. The main difference are the people who come to the respective hotel. Business and leisure travelers have different travel patterns, wants and needs (Lavanchy, 2018). Hence, the hotel must adapt to their clients' preferences.

People travelling for business purposes, travel on behalf of a business in order to fulfill their professional duties (Swarbrooke & Horner, 2001). For business traveler's location is key. They need to be close to scheduled conferences or venues they are visiting on purpose. Furthermore, business hotels need to offer fast Wi-Fi connection as their customers naturally use their mobile phones and laptops to stay connected with their clients and colleagues. In addition, business travelers prefer loyalty programs. They usually have their preferred airline and hotel group where they have an ensured standard comfort and get corporate rates (Lavanchy, 2018).

Leisure travelling on the other hand focuses on recreation, sports and entertainment. Leisure travelers seek tourist attractions, nice hotels or resorts and relaxation in order to take a break from the everyday life (Plog, 1991). People travelling for leisure are very price sensitive as they have time to plan and thus want to have the best deal for their stay. Another important aspect for leisure travelers is special packages from the hotel to enhance their travel experience. In addition, holiday hotels need to have appealing facilities including pools, kids' clubs and evening entertainment (Lavanchy, 2018).

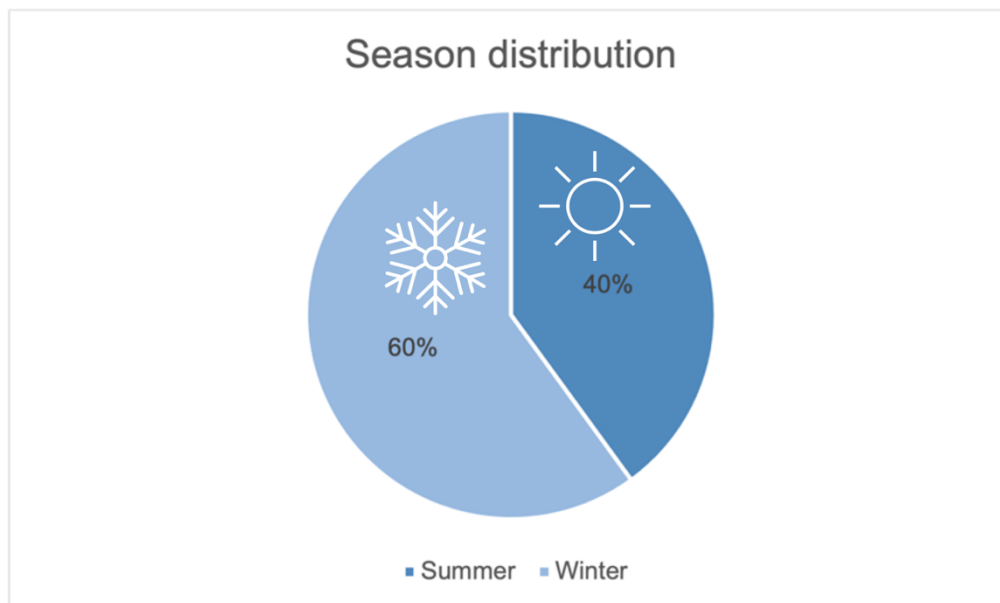
Generally speaking, whether it is a business or holiday hotel, a successful business needs to understand the wants and needs of their targeted customer segment.

### **2.1.3 Holiday Hotel Industry in Tyrol, Austria**

This thesis is geared towards the collection and evaluation of data collected from Holiday Hotels in Tyrol. Tyrol is located in the western part of Austria in the Alps. It is known for its folk traditions, ski resorts and historic sites. The capital city is Innsbruck, which is surrounded by mountains. With the beginning of the 20th century, the demand for Tyrol as a vacation destination has steadily increased (Tirol Werbung, 2021).

The direct gross value added of the tourism in Tyrol amounts about € 4.5 billion euros. This is equal to 17.5% of the total gross value added in the Tyrol (Tirol Tourism Research, n.D.). Furthermore, Tyrol's tourism incomes accounts for nearly 21% of Austria's tourism revenues highlighting the importance of Tyrol's tourism for Austria (Tirol Werbung GmbH, n.D.).

In 2019/20 the winter season was significantly stronger in contrast to the summer season. The winter season accounted for 60% of overnight stays whereas the summer season accounted for 40% (Tirol Werbung GmbH, n.D.). This can be seen in Figure 2 below. Due to the seasonality one can say that Tyrol's tourism industry is heavily depended on the winter season. Due to climate change the winter season might be threatened in the future. Therefore, climate change mitigation and adaptation measures are important to be implemented by hotels in Tyrol. How hotels react to climate change and which measures are taken will be found out by conducting expert interviews and will be discussed in the next chapters.



*Figure 2: The distribution of overnight stays in Tyrol (%) (Tirol Werbung GmbH, n.D.)*

In this thesis the case study of Tyrolian holiday hotels was chosen, as it is a place of longing in the heart of the Alps and counts to Austria's most important tourism destinations. Until 2019, the Tyrolean tourism industry was characterized by steady growth. However, the Corona crisis in 2020 put a damper on this trend. In the beginning of the Covid-19 crisis Tyrol experienced bad publicity due to the fact that the ski resort Ischgl became the EU's Corona hotspot in March (Rieken, 2020). The tourism year 2019/2020 started off with promising bookings and interest from tourists. However, the onset of the Covid-19 pandemic hit the tourism industry particularly hard. Significant declines of



22.4 percent in overnight stays and 29.3 percent in arrivals were the outcome of the global pandemic (Tirol Werbung GmbH, n.D.).

To sum up this first literature review chapter one can say that the holiday hotel industry is amongst the most important industries in Austria. In which ways the industry is affected by climate change and pandemics will be further elaborated on literature findings in the next sections.

## **2.2 Climate change**

In the last ten years, knowledge about the fluctuations and changes in the European as well as the global climate has developed significantly. Thoughts that were a dream of the future in 1990, are now part of the research or is about to be implemented. Climate change has a great tangible impact on people, including extreme weather events and rising sea levels (Hallegatte, 2016). For many, it even is a threat to their lives and countermeasures require substantial investments.

The global climate is a multifaceted system and is often mistaken for weather. The two terms are distinct but are not independent (Tomlinson, Knapp, Sutherland, & Campbell, 2015). Mark Twain (as cited in Romm, 2016) stated that "Climate is what we expect, weather is what we get", which captures the difference. Weather can be described as the set of atmospheric conditions a specific place and time (Kilsby, et al., 2007). The statistics of the average weather conditions are used to monitor the climate (Romm, 2016). Thus, if the climate changes, weather patterns might also change which can include extreme weather events such as droughts, torrential rains or tornados (Tomlinson, Knapp, Sutherland, & Campbell, 2015).

The Intergovernmental Panel on Climate Change (IPCC) forecasts a global temperature rise of 4 to 12 degrees Celsius over the next century (Jackson, 2021). This can be largely attributed to the greenhouse gases which are produced by human activities. Greenhouse gases are gases such as carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>) and Nitrous oxide (N<sub>2</sub>O) (United States Environmental Protection Agency, 2021). The GHGs are responsible for absorbing energy, which is then trapped in the atmosphere (EIA, 2020). Light

is let into the atmosphere, but heat is trapped by the GHGs which act like a glass wall. Hence, this phenomenon is called 'greenhouse effect'. Thus, the more GHGs are let into the atmosphere through human activity such as urbanization, agriculture, land use change, and energy consumption, the more heat gets locked up which leads to rising temperatures and its aftermath (Nunez, 2019).

### **2.2.1 The tourism industry's effect on climate change**

The relationship between tourism and climate change is double edged. The tourism industry impacts climate change and climate change impacts the tourism industry. Through the operation of accommodation, transportation and activities such as operating restaurants, bars or scenic tours, carbon dioxide is emitted. Carbon dioxide is the most known and influential GHG and is responsible for the increase in temperatures (Peeters, 2007). As tourism is seen as the largest economic sector worldwide according to the World Travel & Tourism Council, the impact of tourism on climate change is known to be serious, but uncertainties on the exact extent exists (WTTC; Accenture, 2007). Most negative environmental impacts result from the tourism industry through the creation of resorts, golf courses or general tourism facilities and most importantly the high frequency of travelling (Stainton, 2020). Ironically, the industry often destroys the assets on which they depend. Nevertheless, with the rise of sustainable tourism, the tourism industry has the potential to contribute to environmental protection and conservation by raising awareness and therefore protecting the climate and environment. The section below will elucidate the positive effects of tourism on the environment.

#### **2.2.1.1 Positive environmental impact of the tourism industry**

During the twenty-first century several new forms of tourism, such as 'clean up' or 'sustainable' tourism have been created (Archer, Cooper, & Ruhanen, 2005). These new forms of tourism are an initiative together with the UNWTO in order to promote the tourism's role in the advancement of the SDGs (Gillies, 2018). SDGs stands for Sustainable Development Goals and incorporate 17 unique goals, which were designed by the United Nations in order to create a positive impact (UN, n.d.). As tourism is seen as the largest economic sector it has the potential to contribute to all SDGs either directly or indirectly. Especially by targeting the goals 7 (Affordable & Clean Energy), 12 (Responsible

Consumption & Production), 13 (Climate Action) and 14 (Life below water) the environmental impact of the industry can be improved leading to a slowdown of climate change. This is supported by Secretary-General Zurab Pololikashvili who stated that “Tourism plays a vital role in many, if not all, of the 17 Goals” (as cited in The World Tourism Organization, 2018).



Figure 3: UN Sustainable Development Goals (Adapted from “Tourism for SDGs”, n.D.)

Figure 3 shows an illustration of the 17 SDGs. The UNWTO launched an online platform in 2018 in order to help achieving the SDGs with the assistance of the tourism industry (UNWTO, 2018). The web page allows users to be actively engaged by sharing content, projects or also having access to a wide range of resources.

However, the tourism industry does not only have positives sides. Negative environmental impacts still outperform the positive impacts which leads to climate change and many other negative impacts. These impacts will be discussed in the next section.

### **2.2.1.2 Negative environmental impacts of tourism**

Negative environmental impacts due to tourism arise when the amount of visitor use exceeds the environments capability to handle the use (Stainton, 2020). The majority of tourism forms, such as cruise ship tourism, destroy irreparable natural habitats and put enormous pressure on particular areas (Archer, Cooper, & Ruhanen, 2005). The negative environmental impacts due to tourism can be structured into four main areas:

## 1. Depletion of natural resources

The main forms of depletion of natural resources concern the water resources, land degradation and local resources (Srinivas, 2001). Water is one of the most important natural resources the planet has. Through the overuse of water by means of having swimming pools, golf courses or by simply washing all the towels in hotels and resorts, the tourism industry contributes to water shortages as well as the massive amount of wastewater.

Land degradation is the loss of the soil quality as well as land utility due to human activities or extreme weather events such as droughts (Global Environment Facility, 2021). Especially through increased construction of resorts and infrastructure, increased pressure is put on soil, wildlife and scenic landscapes. In addition, when numerous tourists trek or ski the same path for a long period of time the landscape erodes. Due to this problem, tourist areas such as the Machu Picchu in Peru were forced to set a limit of 500 tourists per day in order to threshold the damage of erosion (Sassa, Fukuoka, Shuzui, & Hoshino, 2002).

Local resources are usually under pressure during high season. Resources like water, food supply or energy are often scarce at unique tourist destinations like islands. During high season, tourist destinations often experience ten times more congestion than during low season (Sunulu, 2003). This puts pressure on the local resources and could lead to a short supply and exploitation.

## 2. Pollution

The travel industry is one of the fastest growing industries these days (Semenza & Ebi, 2019). In 2017, more than 4 billion customers travelled with commercial airline (Semenza & Ebi, 2019). In 2018 this number increased to 4.4 billion (Semenza & Ebi, 2019). The figure is expected to grow further, which highlights the problem of increasing greenhouse gas emissions from air travel. It is said, that on a global level, the tourism industry contributes to at least half of the greenhouse gas emissions through transportation (Pröbstl-Haider, Lund-Durlacher, Olefs, & Pretenthaler, 2021). The UNWTO (2019) claims that transport-related emissions from international tourism are expected to grow by

45% from 2016 to 2030. The transport-related emissions from domestic tourism are expected to grow by 21% from 2016 to 2030 (UNWTO, 2019).

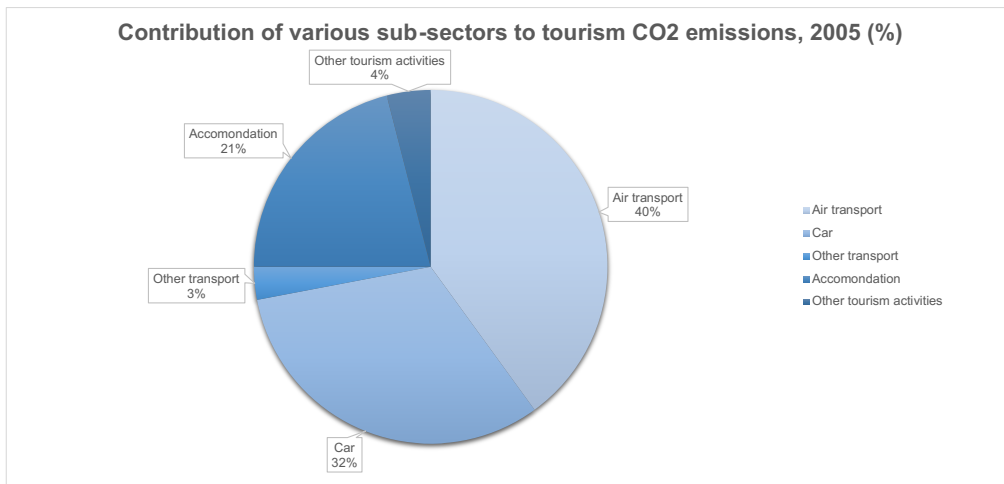


Figure 4: Contribution of various sub-sectors to tourism CO<sub>2</sub> emissions (Adapted from “UNWTO”, 2019, p. 12)

Figure 4 displays a pie diagram showing the tourism's CO<sub>2</sub> emission contribution. According to the UNWTO (2019) transport accounts for the largest amount of CO<sub>2</sub> emissions in the tourism industry with over 70% in 2005. The high share of transport CO<sub>2</sub> emissions can be traced back to the fact that the tourism industry is evolving towards an increased use of luxurious high energy transportation such as private jets (Peeters, 2007). CO<sub>2</sub> emissions account for one form of pollution which is caused by tourism, being air pollution.

Tourism can also cause other forms of pollution like any other industry including oil and chemicals, solid waste and littering, noise pollution as well as visual pollution (Sunulu, 2003). In areas with a high number of tourist activity waste disposal is a problem as well. Adding to this, cruise ships are said to produce a total of 70.000 tons of waste per year (Stainton, 2020). This is a major problem for the marine life as animals increasingly die due to solid waste and littering.

### 3. Physical impacts of tourism development

As discussed in the section above, the tourism industry itself has an enormous impact on the environment. The development of the tourism industry leads to the physical impacts (Cohen, 2002). Physical impacts can either be caused by tourism development which includes construction and land clearing or by

continuous tourist activities. The physical impacts by tourist activities will be discussed in the next section.

Table 1 shows the main negative environmental impacts caused by tourism development.

<p>1. Infrastructure development and construction</p>	<p>In order to have a wide range of offers for tourists, it is essential for tourist destinations to build various tourist attractions, accommodations and tourism facilities. In addition, a good infrastructure including airport, road and rail construction is often needed. Loss of wildlife habitat, land degradation or the deterioration of scenery are often the outcome.</p>
<p>2. Intensive unsustainable use of land and deforestation</p>	<p>Lots of land is annually deforested in order to build a wider range of tourism facilities. The creation of ski slopes does not only take up lots of land causing massive deforestation but also leads to erosion and severe disturbance of the land and wildlife.</p>
<p>3. Marina development</p>	<p>The development of marinas often causes modifications in currents due to monumental breakwaters needed to protect the harbor. In addition, for example the Maldives have severely damaged coral reefs by mining them in order to be able to build resorts with ocean villas.</p>

*Table 1: Physical impacts caused by tourism development (Sunulu, 2003)*

#### 4. Physical impacts from tourist activities

One of the major physical impacts caused by tourists is called trampling. Trampling is the action by tourists using the same trail over and over again which eventually causes damage to the soil and vegetation (Grabherr, 1982). Another problem caused by tourist activity is the degradation of marine ecosystems (Stainton, 2020). Tourists often go snorkeling, diving or sport fishing causing destruction to coral reefs which leads to increased stress of the animal population and thus altering of their natural behavior.

Summing up everything that has been said above, tourism is the initiator of a wide range of environmental impacts. The literature shows that there are positive impacts that originate from tourism. However, the negative impacts clearly surpass. Therefore, it is important to adapt sustainable tourism principles in the future. As the environment moved to the center of debate it is important for the foreseeable future to have a balanced relationship between the tourism industry and the environment. This issue will be discussed in the next section.

##### **2.2.2 Climate change impact on tourism**

Tourism does not only contribute to climate change but is actually heavily affected by the consequences of climate change (Higham & Hall, 2005). Numerous negative effects like a decrease in snowfall and the consequently shorter skiing seasons will keep tourists away from holiday destinations which were once popular.

Elsasser and Bürki (2002) claimed that the winter-sport tourism industry is dependent on regularly sufficient snow conditions. The authors state that a ski-resort can be considered snow-reliable when 7 out of 10 winters provide the area with at least 30 - 50 centimeters snow and maintain those conditions for at least 100 days during the season (Elsasser & Bürki, 2002). Due to the climate change and its effects like rising temperatures and frost-free seasons, it is unsure if those conditions can be preserved (Shaftel, 2020). Climate change has a major impact on existing tourism strategies and concepts at regional, national and international levels. The central Institute for Methodology and Geodynamics in Austria has carried out several studies on the topic of climate

change and the effects on tourism in Austria. The institute discovered that winter tourism will sense several severe consequences in the future whereas ski areas above 1600m will have ensured good snow conditions for the time being (ZAMG, 2020).

Additional studies, carried out by the ZAMG, have shown that summer tourism will benefit from these conditions as locations above 1000m remain free of heat stress (ZAMG, 2020). This will lead to a steady shift of tourists preferring higher latitudes in summer (Rosselló-Nadal, 2014). In addition to the heat stress, considerable problems regarding the water supply due to the decrease in precipitation will arise in dry countries. Drought and heat could cause an increased number of forest fires that directly endanger tourist facilities. However, this is not the case in Austria as the country benefits from regular precipitation.

The federal ministry of science, research and economy in Austria conducted a study focusing on opportunities and risks for summer and winter tourism (Bundesministerium für Wissenschaft, Forschung und Wirtschaft, 2015). This study matches the outcomes of the ZAMG. Both institutes predict that summer tourism will generally benefit from higher altitudes and therefore less heat stress, only facing a limited number of problems. Negative effects for summer tourism include the loss of permafrost and melting glaciers, which could constitute threatening situations especially for mountain climbers and hikers (Pröbstl-Haider, Haider, Wirth, & Beardmore, 2015). These risks can be severe, although the expected effects for summer tourist destinations in Austria are overall likely to be positive. Nevertheless, the risks for the snow-dependent winter sports tourism are classified as high to very high (ZAMG, 2020).

The scenario of steadily increasing greenhouse gases leads to a decrease of biodiversity, coral reefs, glaciers and cultural heritage (Morrison, et al., 2020). The consequence of diminishing tourism assets is the growth of 'last chance' travel deals targeting these destinations before they are destroyed or disappear (Semenza & Ebi, 2019). A similar trend can be seen in the winter-sport tourism industry, as holiday hotel destinations in Tyrol depend on certain assets such as snow.



Over the last century, the temperature has risen by a global average of about 0.7°C (IPCC, 2001). As it can be seen in Figure 5, the temperature increase in the alpine region was up by 2°C in the last 150 years. About 50 percent of the temperature increase happened within the last 30 years.

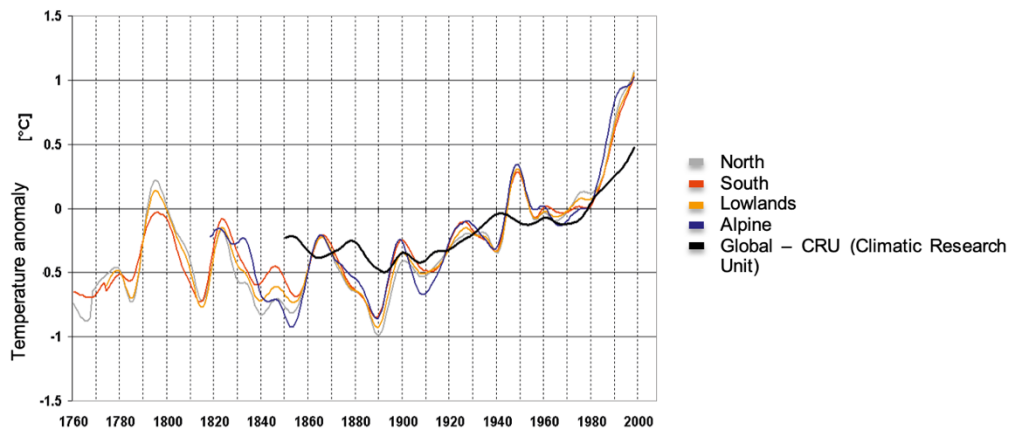


Figure 5: Temperature development in the Alpine region compared to the global mean (Formayer & Kromp-Kolb, 2009)

Figure 5 displays the temperature anomalies of the Alpine region in Austria compared to the global mean. The global mean is the temperature averaged over the entire surface of the earth, including land and water, over a given period of time (NOAA, 2021). A temperature anomaly can be positive and negative. A positive anomaly exhibits a warmer temperature than the reference value while a negative anomaly indicates that the measured temperature was cooler than the reference value (NOAA, 2021). Clearly one can see that Austria is experiencing positive temperature anomalies, meaning that the temperatures are rising. From 1980 to 2000 the temperature rise was approximately one degree.

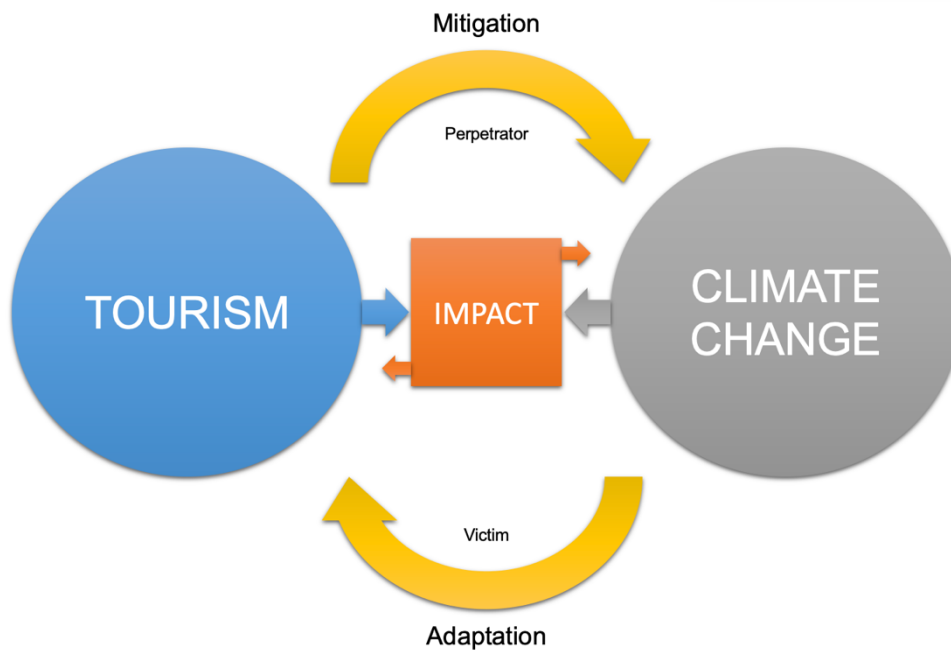
As the tourism industry is one of the greatest economic victims of the climate change crisis it is important to keep the negative climate change impacts to a minimum (Pang, McKercher, & Prideaux, 2013). Therefore, it will be important for popular tourist destinations to assess their vulnerability and to shift the focus towards high value and low-carbon tourism (Gössling, Hall, & Scott, 2009). The focus on mitigation and adaptation climate change measures are hence increasingly gaining importance and are already indispensable for many societies. These measures will be discussed in-depth in the next section.

### **2.2.3 Responding to Climate Change – Mitigation and Adaptation**

According to the IPCC (2001), the extent of climate change effects on individual regions varies over time. The ability of different societal and environmental systems to mitigate and adapt change are of vital importance. In order to be economically successful in the future, tourism destinations need to build up long-term competitive advantages. Tourism destinations need to develop strategies that deal with the further development and the transformation of innovative success potentials. Strategies provide the framework for subsequent action planning and the implementation of mitigation and adaptation measures. According to NASA, mitigation is the process of reducing and avoiding the production of more heat trapping GHGs in order to avoid even higher rising temperatures (NASA, 2021). Mitigation strategies include the implementation of renewable energy sources like solar or wind, the usage of more sustainable transportation methods like electric vehicles or also to put taxes on carbon emissions to prevent an increase of pollutant emissions (WWF, n.D.).

As climate change is already happening and first consequences are now visible it is important to adapt to them in order to prepare for future impacts and also to potentially benefit from opportunities linked to climate change. Hence, adaptation is the adjustment of social, economic or ecological systems towards actual or projected climate stimuli (United Nations Framework Convention on Climate Change, n.D.). Adaptation to climate change is a long-term process, which highlights the importance of a strategic approach.

Figure 6 displays the relationship between tourism and climate change. Moreover, the role of mitigation and adaptation can be clearly seen from the diagram. Mitigation addresses the cause of climate change whereas adaptation addresses the impact of climate change. On the one hand, the tourism industry needs to implement mitigation climate change measures because the industry is seen as one of the perpetrators of the issue. On the other hand, the industry needs to take action to manage the arising risks of climate change as tourism heavily depends on environmental assets. One can also see how both, the tourism industry and the climate change, are connected because they mutually impact each other as already discussed in chapter 2.2.1.



*Figure 6: Relationship between Tourism and Climate Change, as illustrated in (World Tourism Organization, 2018)*

According to the UNWTO (2008) the tourism industry needs to focus on the following four major mitigation strategies to reduce GHGs:

1. Increase the usage of carbon neutral or renewable energy like wind, solar energy, biomass or hydro.
2. Reduce energy usage by using environmentally transportation methods and changing management practices in order to limit business travelling.
3. Improve energy efficiency by using new technologies like energy-saving lamps.
4. Store or sequester CO<sub>2</sub> through carbon sinks. This can be achieved through offsetting, meaning to compensate for generated emissions.

An ideal outcome for preserving the environment for future generations should be to find a way to reduce GHGs, carbon neutrality and to eliminate any other emissions (Walmsley, 2011).

#### **2.2.4 Climate change mitigation and adaptation measures**

Climate protection measures are a vital component in order to protect the environment. The term climate protection includes measures that counteract

global warming and the associated climate change (Austrian Development Agency, n.D.). A measure is an action with the purpose of achieving a clearly defined goal. In many cases, several measures are bundled to achieve one goal (Hogrebe, 2014). As mentioned before, climate change measures can be classified as mitigation and adaptation.

The implementation of measures against climate change is a challenge for politics, industry and business on the one hand. On the other hand, citizens also have a role to contribute towards protecting the environment. One of the most prominent climate protection measures, in addition to energy saving, is the reduction of greenhouse gases and thus the relief of the environment and climate. These measures are classified as mitigation measures. The European Environment Agency (2018) has listed the most important mitigation measures to counteract climate change on their website. The first listed measure to address climate change is to introduce a tax on carbon. Governments set a price that emitters must pay for each ton of greenhouse gas emissions they emit. By doing this, governments hope to change the mindset of many companies. Companies shall switch to new renewable technologies in order to reduce their emissions and thus save money in the form of taxes. A further measure that is listed are the emission standards for vehicles. An emission standard for vehicles sets a limit for car producers of the amount of specific air pollutants allowed to be released in the atmosphere per car. The European Union set a goal for 2021 that allows 95 grams of CO<sub>2</sub> per kilometer per car. This equals to a fuel consumption of approximately around 4.1 liters per 100 kilometers (European Union, n.D.). In addition, improved energy efficiency for buildings is also a mitigation measure listed by the European Environment Agency. Stricter policies need to be set in order to reduce energy consumption as well as fuel use for heating and cooling. Furthermore, monetary incentives should be given in order to stimulate businesses and individuals to renovate buildings that are well-insulated and do not need massive amounts to cooling and heating. It will also be important to reduce CO<sub>2</sub> traffic to the maximum extent possible in the future. In order to reduce GHGs created by traffic several tactics are possible. Firstly, battery vehicles and plug-in hybrids as well as biofuels are an important part of the solution to reduce CO<sub>2</sub>. Secondly, governments should put taxes on fossil fuel vehicles as well as fuels. Lastly, the public transport infrastructure should be constantly enlarged, and monetary

incentives should be given to residents in order to reduce traffic. To what extent climate protection measures are applied in the Tyrolian hotel industry will be evaluated through expert interviews and analysed in chapter 4.

A further important measure enumerated is the increase of subsidies and support for renewable energies. Energy sources that do not produce greenhouse gases should be supported by governments to incentivize companies to switch from fossil fuels to renewable energy. Support in the form of subsidies or other monetary incentives is widely accepted and has proven to be successful in promoting renewable energy investments. (Nicolini & Tavoni, 2017).

Climate protection measures are part of the challenges that are not adequately solved in a market system by companies. Nevertheless, during the production of individual goods and services, emissions occur that lead to climate change and can directly affect companies or citizens as already mentioned before (Donges, Eekhoff, Feld, Möschel, & Neumann, 2009). For companies it is important to produce as many goods and services as possible at a low price in order to make enough profit. Thus, societal costs are often not taken into account. Therefore, one of the tasks of a state is to make renewable energies attractive with the help of subsidies.

A subsidy is a monetary payment, or a monetary benefit granted by the government or by EU institutions (Corporate Finance Institute, n.D.). It is offered to businesses as well as citizens without compensation. Subsidies are often based on certain conditions or an expected behavior (Weizsäcker, n.D.). To contain the climate crisis and thus preserving the quality of life, counts to one of the main tasks of the next century. Therefore, the Austrian government has set the goal to become climate-neutral by 2040. In order to achieve this goal, the 'Climate and Energy Fund' became effective in 2007 (Bundesministerium Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie, n.D.). The Climate and Energy Fund is designed to realize a sustainable energy supply in Austria by increasing the energy efficiency and the share of renewable energy sources. The reduction of greenhouse gas emissions and therefore contributing to the fulfilment of the climate strategy is of great importance. The common goal of all subsidized projects is the creation

of a CO<sub>2</sub>-free economy and society. In addition, the strengthening of the innovative power of domestic industries and companies and the sustainable use of regional resources is also of vital importance (Klima Energie Fonds, n.D.).


In 2021 the main focus of the 'Climate and Energy Fund' is to help businesses to decrease the number of fossil-fueled motor vehicles with the help of subsidies and a budget volume of 35.5 million euros that available for the e-mobility initiative (Klima- und Energiefonds, 2021). In addition, the expansion of renewable energies especially of photovoltaic systems and the storage of the generated energy is of high importance. A total budget volume of 40 million euros is available for photovoltaic systems in 2021 (Klima- und Energiefonds, 2021). In addition to photovoltaic systems, the expansion of heating systems based on renewable energies and measures to increase energy efficiency like solar systems are also promoted and subsidies by the government. Subsidies are an efficient incentive in order to promote clean energy systems for businesses. At the same time, they make it cost effective for businesses such as hotels to preserve the quality of life by reducing greenhouse gas emissions.



In addition to funding, hotels can also register or apply for eco-labels and certifications. Eco-labelled hotels can raise their profile with the values of environmental protection and sustainability, especially in times of crisis. In addition to the traditional star-ratings of hotels, there are currently already over 150 seals concerning quality and sustainability (Fair Unterwegs, 2021). As one of the goals of this thesis is to evaluate in which ways hotel owners work against climate change within their establishment it will be interesting to find out how many hotels within the sample operate in a sustainable way and have obtained an eco-label.

On the one hand an ideal vacation is characterized by the fact that it satisfies the guest in every aspect, does not put excessive pressure on the destination, guarantees economic success for the business as well as providing the local population with employment (Hamele & Pils, 2004). On the other hand, another characteristic is high environmental quality. Tourism eco-labels have been introduced to a variety of destinations and businesses to label tourism products that have been found to be particularly environmentally friendly. Eco-labels should provide tourists guidance in choosing high-quality, environmentally and


socially responsible hotels and resorts. Accommodations, which have an eco-label or certification promise high environmental and service quality (Österreichisches Umweltzeichen, 2021).

The most prominent Eco-labels for hotels in Austria are going to be listed below in table 2.

Label	What is it?
<p data-bbox="343 969 746 1048"><b>1. The Austrian Eco - Label – Green Hotel</b></p> 	<p data-bbox="810 656 1286 1294">The Austrian Eco – Label is awarded by the Austrian Federal Ministry of Agriculture and Forestry, Environment and Water Management (BMLFUW) to tourism and leisure establishments as well as for travel offers. It was the first eco-label in tourism worldwide issued by a state. In order to ensure high eco-friendly quality and service standards hotels are audited independently every 4 years (Fair Unterwegs, 2021).</p> <p data-bbox="810 1312 1270 1644">The criteria for awarding tourism businesses with the Austrian Eco-label cover all environmental aspects of a tourism business including waste management, energy saving, regional sourcing and environmentally friendly travel.</p>

<p style="text-align: center;"><b>2. The EU Eco-Label</b></p> <div style="text-align: center;">  </div>	<p>The EU Eco-Label guarantees excellent quality and high environmental standards. It is awarded to consumer goods or facilities that are particularly environmentally friendly (EU Eco-Label, 2021).</p> <p>It was launched by the European Commission in 1992 and since the year 2000, services are also labeled with the EU Ecolabel. In order to ensure high eco-friendly quality and service standards hotels are audited independently every 3-5 years.</p> <p>Further information on the EU Ecolabel can also be found at <a href="http://www.ecolabel.eu">www.ecolabel.eu</a>.</p>
<p style="text-align: center;"><b>3. Die Blaue Schwalbe (The Blue Swallow)</b></p> <div style="text-align: center;">  </div>	<p>'Die Blaue Schwalbe' was the first eco-label for accommodations. Since 1989 it has been awarded to ecologically oriented hotels, guesthouses, inns and campsites in Europe. Certified accommodations can be primarily found in travel regions that can be reached without a private car or flying (Losang, 2000).</p>



<p><b>4. TourCert</b></p> 	<p>The TourCert Label promotes responsible tourism. The Label is provided to travel agencies, accommodation providers as well as travel destinations. In each case, sector-specific requirements for data collection and certification apply. In order to ensure high eco-friendly quality and service standards, independent on-site audits are conducted every 2-3 years (TourCert, n.D.).</p>
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*Table 2: Eco-Labels for Tourism Enterprises valid in Austria*

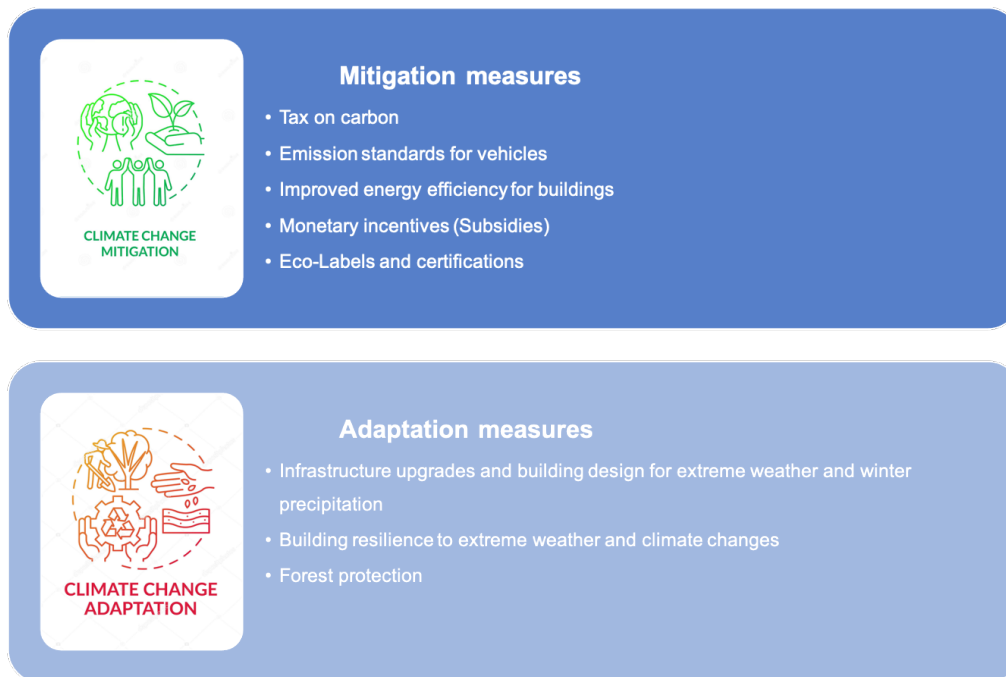
As already mentioned, the four Eco-Labels presented above are prominent Eco-Labels in Austria. Nevertheless, throughout the research other Eco-Labels can be identified which will be elaborated on in the 'Findings' section.

As already discussed, in addition to mitigation strategies, the adaptation strategies also have to be considered. Adaptation is a required adjunct to mitigation when addressing climate change. Adaptation means appropriately adjusting decisions, activities and ways of thinking based on observed or expected climate changes, with the aim of limiting damage and taking advantage of new opportunities (Moser & Ekstrom, 2010).

A notable adaptation measure is the improvement of infrastructure and the design of buildings for extreme weather conditions and winter precipitation (Ingenium, 2017). These are important due to the increasingly high intensity, duration and frequency of extreme rain and snow events which can lead to floods, avalanches and mudslides. In addition, it is important to build resilience to extreme weather and climate changes. The importance of resilience is discussed in more detail later in the literature review.

As forests are likely to be affected by climate change and the associated disturbances, adaptation is needed to decrease the vulnerability of forests to

climate change. It is proven that forests contribute a wide range of ecosystem services that enhance human well-being and reduce social vulnerability (Locatelli & Pramova, n.D.). Furthermore, forests are important because they can help societies adapt to both current climate hazards and future climate change.



*Figure 7: Overview of mitigation and adaptation measures*

Figure 7 summarizes the elaborated mitigation and adaptation measures.

To sum up the chapter of climate change one can say that the tourism industry and climate change have a mutual impact on each other. While climate change does have some positive impacts, the negative ones definitely overrule. Therefore, it is important for businesses operating in the tourism industry to implement climate change mitigation and adaptation measures in order to slow down the process of climate change. Other climate change measures that help to protect the environment are widely supported by the government through subsidies and awareness can be raised through Eco-Labels.

As the climate change topic has already been discussed the next section will elaborate on literature findings concerning the pandemic and its impact on the tourism industry.

## **2.3 Pandemic**

Due to globalization, infectious diseases have the ability to spread much faster than in the last few decades. Indeed, in the last century, social relationships and connections from distant places have intensified. The technological development enables people not only to exchange information expeditious via the internet, but also to move quickly between countries and continents due to the shrinking time space convergence (Georgantzas, Katsamakos, & Solowiej, 2010). Experts have rated the probability of an outbreak of a global pandemic at the beginning of the 21st century as higher than in previous decades (Glockner, Petersen, & Schaich, 2012). In addition, the WHO warns of increasing resistance of pathogens to drugs (WHO, 2021). As a result of the increased resistance rate, disease treatment is becoming increasingly difficult, and therefore diseases are becoming more fatal for many patients.

The locomotion these days is so fast that the incubation period of an infectious disease is even longer than the journey itself (WHO, 2007). The incubation period indicates the time from the infection to the beginning of the disease when the infected person has developed symptoms. The mean incubation time (median) of the new SARS-CoV-2 diseases is given in most studies as 5-6 days (Robert Koch Institut, 2021). Due to the fact, that nowadays people move very fast, and the incubation times are often longer than the journey, the SARS-CoV-2 virus, also called the coronavirus, paralyzed the whole world for several months in the first half of 2020. The number of infected people rose rapidly, so that the entire global economy was almost everywhere shut down trying to stop the spread of the virus.

### **2.3.1 Difference between Epidemic and Pandemic**

It is important to separate the two often mistaken terminologies 'Epidemic' and 'Pandemic'. The WHO (2008) defines the term epidemic as "The occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy". In other words, an epidemic is an infectious disease that is accumulates at a specific location and is temporally limited. These infectious diseases are most commonly caused by viruses or bacteria. Due to the fact that these diseases can be transmitted quickly is the reason why a large number of people at a

certain place get infected within a short period of time. The best and most common example of an epidemic in Austria is the yearly seasonal flu.

In contrast to an epidemic, a pandemic occurs when an infectious disease spreads across many countries and continents (BAG, 2018). Therefore, the pandemic, unlike the epidemic, is not limited to a specific location. Moreover, it lasts for several months. The declaration of a pandemic is always made by the Director-General of the WHO (WHO, 2020). The rapid transmission is the reason for the rampant spread of the virus or bacteria. Therefore, the affected countries must take effective measures to contain the pandemic. In fact, depending on the intensity, severity and duration of the pandemic, different measures have to be implemented. Restrictions regarding social contacts, such as travel restrictions, quarantine, closure of public gathering places, and many other measures can be introduced. A pandemic affects individuals and organizations, on both the physical and mental health level as well as on an economic level (Müller, Neuhann, & Razum, 2020). Especially, economic sectors that require direct human contact, such as the tourism industry, are among others most severely affected by the impacts of the pandemic (Czypionka, Kocher, & Schnabl, 2020). The industry will be confronted with a sharp demand decline, as consumers want to avoid contact with a potentially infected person. The worse scenario is a government-imposed ban on opening businesses.

For these reasons, it is essential for companies to establish good crisis management and to limit the negative consequences as much as possible. The effect of the Covid-19 pandemic on the tourism industry will be discussed in the next section.

### **2.3.2 COVID-19 effect on tourism industry**

As of December 2019, an increased number of cases of pneumonia with unknown etiology have been identified in Wuhan (China) a city with a population of approximately eleven million people (Singhal, 2020). According to Chinese authorities, the original site of infection was the "Huanan Seafood Market", a wholesale food market in Wuhan (WHO, 2020). The market primarily trades fish and meat products including alive mammals and birds. One month after the rampant virus (abbreviated as SARS-CoV-2) was identified by

Chinese authorities it was given the name Covid-19 (Coronavirus disease 19). Unlike other industries, tourism does not only suffer the consequences of the Covid-19 pandemic but has also contributed significantly to the rapid global spread of the disease.

Since the coronavirus reached Austria in mid-March 2020, the government has introduced new measures on a regular basis aimed at controlling and slowing down the spread of the pandemic in Austria. Due to the extensive lockdown regulations to contain the pandemic the tourism industry was especially heavily impacted. On a global scale, global travel has mostly come to a standstill. Almost all countries in the world have imposed travel and entry restrictions. As a result of these measures, numerous businesses in the hospitality and tourism sector had to close immediately. The specific measures which were introduced by the Austrian government to contain the Covid-19 crisis will be discussed in the next section.

### **2.3.3 Measures to contain the Covid-19 pandemic in Austria**

As infection numbers grew rapidly, the government introduced the first Covid-19 measures in March 2020. On March 16<sup>th</sup> an extensive ban on entering public spaces came into force. In addition to exit restrictions for private individuals, companies had to close in branches where personal interactions between customers and staff take place. This included trade, tourism and body-related services like hairdressers or cosmetic studios. Sport, cultural and entertainment facilities also had to close. Companies were asked to shift to home office (Baumgartner, et al., 2020). Since March 2020 the measures introduced for coronavirus containment have been constantly developed. Furthermore, the Federal Ministry for Social Affairs, Health, Care and Consumer Protection started to introduce separate containment measures for federal states which have high incidence values apart from the nationwide measures.

The Austrian nationwide measures as of April 2021, to contain the Covid-19 Pandemic are illustrated below in table 3.

Measure	Federally regulated (from April 1 <sup>st</sup> 2021 by ordinance of the federal government) Special regulations for high incidence regions
Distance and FFP2 – mask requirement	<ul style="list-style-type: none"> <li>• <b>2 meters distance</b> in all public spaces for people who do not live in the same household</li> <li>• <b>FFP2 mask requirement</b> in public areas as well as with people that do not share the same household</li> </ul>
Exit restrictions	<p>Exit restrictions 20:00 – 06:00, except for:</p> <ul style="list-style-type: none"> <li>• Covering the basic needs of daily life</li> <li>• Physical and psychological recovery (e.g., going for a walk, individual sports)</li> <li>• the use of health services</li> <li>• Professional or educational purposes</li> <li>• Dealing with administrative or judicial procedures that cannot be postponed</li> <li>• Participation in events permitted by the regulation</li> <li>• Participation in elections</li> </ul>
Events	<p>Events are generally prohibited except:</p> <ul style="list-style-type: none"> <li>• Extracurricular youth education</li> <li>• Meetings of self-help groups</li> <li>• Funerals with a maximum of 50 participants</li> <li>• Demonstrations with 2-meter distance and FFP2 masks</li> </ul>
Gastronomy & Accommodation	<p>Gastronomy &amp; Hotels closed</p> <ul style="list-style-type: none"> <li>• Pick-up of meals between 06:00 and 19:00 and 24/7 delivery service possible</li> <li>• Accommodation is only possible in special cases, especially for professional purposes</li> </ul>

Trade & Service	<ul style="list-style-type: none"> <li>• <b>Retail is open</b> (06:00-19:00): FFP2 mask, 2-meter distance, 20m<sup>2</sup> per customer</li> <li>• <b>All services can be offered:</b> negative Covid-19 test requirement, FFP2 mask, 2-meter distance,</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Normal operation for kinder garden and elementary schools</li> <li>• Face to face lessons for the secondary level requires weekly testing and FFP2 masks</li> </ul>
Work / Job	<ul style="list-style-type: none"> <li>• Home office where possible</li> <li>• FFP2 masks or special protective devices (shields) between workspaces</li> </ul>
Hospitals & Nursing homes	<ul style="list-style-type: none"> <li>• <b>Distance and FFP2 masks</b> (for direct patient contact)</li> <li>• Visitor Limit: 1 visitor per day, maximum four visits per week</li> <li>• Tests for visitors</li> <li>• <b>Tests for employees</b> (weekly in hospitals, twice a week in nursing homes)</li> </ul>
Leisure & culture	<p>Open are</p> <ul style="list-style-type: none"> <li>• <b>Culture:</b> museums, art galleries, libraries, bookshops and archives</li> <li>• <b>Leisure:</b> zoos, botanical gardens</li> </ul>
Sport	<p>Sports facilities <b>only open outdoor</b> and if a distance of 2 meters can be guaranteed</p> <ul style="list-style-type: none"> <li>• Maximum 10 participants and 2 trainers which need to register before</li> </ul>

Measure	High Incidence Areas
Exit test requirement	In areas where the incidence rates are too high, lockdowns can be imposed, and test are required if the area wants to be left

*Table 3: Current nationwide measures in Austria aiming to contain the Covid-19 crisis as shown on the official homepage of the 'Corona Ampel' (Corona Ampel, 2021)*

As it can be seen in table 3, the whole economy has suffered a severe slump due to the Covid-19 crisis. One thing is clear, the crisis and its profound disruptions will be followed by new areas of opportunity. How these opportunities are utilized will have a lasting impact on the coming years - in society and the economy as well as in each individual company.

#### **2.3.4 Aids for the hotel industry to combat the Covid-19 crisis**

In the previous chapter, measures to contain the Covid-19 crisis were already discussed and displayed in a table. This chapter will explain how hotels receive aid in Austria in order to survive the pandemic.

Since entering accommodation establishments for the purpose of obtaining services is prohibited, hotels did not have any source of income but still need to cover running costs (WKO, 2021). In order to support the tourism industry and to avoid liquidity bottlenecks that could threaten the existence of the many hotels the Federal Ministry of Agriculture, Regions and Tourism together with the Austrian Hotel and Tourism Bank has made available many financial aids. These aids should primarily serve companies in the tourism and leisure industry to maintain the liquidity of despite sales shortfalls (Bundesministerium Landwirtschaft, Regionen und Tourismus, 2021).

The most important financial Covid-19 aids for the hotel industry include the 'short-time work' model, financial loss replacement, and revenue replacement. These measures are explained in table 4. However, they show just an excerpt of the total aids which are available for Austrian businesses.



Financial Support measure	Explanation
<p><b>The Short-time work model</b></p>	<p>The short time working model was introduced at the beginning of the pandemic on the 1<sup>st</sup> of March 2020 (Portal der Arbeiterkammern, n.D.). Short-time work can be explained as the temporary reduction of normal working hours and pay due to economic difficulties. Its purpose is to temporarily reduce labor costs and also to retain employees without having them to fire. In short-time work, employees reduce their working hours and still continue to receive most of their previous pay. The employer receives the so-called short-time work allowance from the AMS (Public Employment Service) - provided all requirements are met (WKO, 2021).</p>
<p><b>Financial loss replacement</b></p>	<p>The financial loss replacement aids businesses as a compensation for losses due to Covid 19 crisis. Every business that has a registered office or permanent establishment in Austria and carries out an operational activity in Austria can apply for it. The main purpose of this funding is to overcome liquidity difficulties through this compensation (WKO, 2021).</p>

<p><b>Revenue replacement</b></p>	<p>To support the Austrian economy, the federal government has made available a lockdown sales replacement as a further aid measure under the Corona Relief Fund since the 6<sup>th</sup> of November 2020. This is especially important for the hotel and gastronomy industry due to total closure.</p> <p>The amount of the lockdown sales compensation is based on the comparable sales of the previous year and up to 80% of the loss of sales (max. EUR 800,000) can be compensated (WKO, 2021).</p>
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*Table 4: An excerpt of the financial aid measures available to the tourism industry*

In addition to the Austria-wide support measures, the province of Tyrol has also introduced additional Corona Support Funds for accommodation establishments. Eligible for those funds are accommodation establishments, whose operating location is located in Tyrol and identifies with the main residence of the business owner. In case an establishment claimed support from the federal emergency fund, from the federal fixed costs grant or on whom a legally binding financial penalty has been imposed in the last five years prior to the application the accommodation establishment is not eligible for funding (Österreichische Hotelierversammlung, 2021). The funding is granted as a non-repayable one-off grant and amounts to 3,000 euros.

To conclude the chapter concerning the pandemic one can say that the Covid-19 crisis was a major setback for the economic sector and especially the tourism industry worldwide. Austria has introduced several measures in order to keep the economy afloat. Whether it is climate change or a pandemic, businesses need to become resilient in order to be able to respond to challenges and change in difficult situations. Therefore, the topic of resilience is increasingly gaining importance. As one of the goals of this thesis is to find

out how to the hotel industry can be resilient in the future, this topic will be elucidated in depth in the next section.

## **2.4 Resilience**

The term resilience is derived from the Latin term *resilire* which means to bounce back or rebound (Cambridge Dictionary, n.D.). Originally, the term described the physical ability of a body to bounce back to its original shape after a change in form (Lampert, Altendorfer-Kling, & Thun-Hohenstein, 2020). Therefore, resilience can be explained as the ability of an organization to bounce back in times of crisis and to maintain its ability to act without sustained impairment (Smith, Tooley, Christopher, & Kay, 2010).

The economy is currently experiencing a high level of vulnerability due to the Covid-19 pandemic. However, this is not only the case in terms of a pandemic occurrence such as Covid-19, but also applies to other possible disruptions such as climate change. Resilient companies remain agile and adapt to crises in the best possible way.

### **2.4.1 The Seven Pillars of Resilience**

Psychologists have developed various models to explain the concept of resilience. One of these models is the model called the 'Seven Pillars of Resilience' (Charigault, 2011). It helps us to understand how individuals or businesses can strengthen and build inner resilience against stress. The two American psychologists Reivich and Shatté described the seven most important resilience factors in their book 'The Resilience Factor' in 2003 (Reivich & Shatte, 2003).

Resilience is needed for two reasons. Firstly, resilience is the basis for living a healthy and successful life, and secondly, it is important to be able to access all the available resources even in stressful phases of life. Moreover, resilience is an important factor in achieving sustainable corporate success (Philipsen & Ziemer, 2014).



Figure 8: The 7 Pillars of Resilience (Bathen-Gabriel, 2017)

There are different ways of observing resilience. However, the key factors and approaches for successful resilience management can be summarized as follows in figure 7. The figure displays a visualization of the 'Seven Pillars of Resilience'. The Seven Pillars of Resilience are Optimism, Acceptance, Solution oriented, Self-efficacy, Take responsibility, Network orientation, Future planning. In order to get a better understanding of the 'Seven Pillars of Resilience' these will be explained in further detail below.

- Optimism

Optimism is the firm belief that crises can be overcome after a while. Furthermore, it is the belief that crises are a temporary setback and that, in perspective, they will bring a positive influence upon life (Seligman, 2001).

- Acceptance

Crisis management is only possible if the facts of the crisis are faced. Acceptance is an absolute prerequisite for processing crises. This factor, again, requires the awareness that a crisis will pass, leading back to the first pillar which is optimism (Charigault, 2011).

- Solution oriented

Solution orientation is generally understood to be a corporate direction in which the collective thinking and behavior is aimed at solving problems (Kawohl, 2010). With optimism and acceptance, you can manage stress and seek solutions.

- Self-efficacy

Self-efficacy can be described in a way that people with a strong belief in their own competence are more persistent in accomplishing tasks, less prone to anxiety disorders and depression, and more successful. Thus, resilient people take control of their lives, believe in themselves and forgive others (Fisch, 2021).

- Take responsibility

Resilient people take realistic responsibility for their actions by understanding why they acted the way they did, accepting their own contribution, and taking external influences into account.

- Network orientation

Cultivating a stable, social environment is important to find ways out of the crisis. A resilient behavior requires a functioning network that protects and provides the feeling of having a firm place in life. Thus, social stability also entails emotional stability. Therefore, it is important to look for people whom one can confide in and who encourages one. This is also very important when leading a company out of a crisis (Fisch, 2021).

- Future planning

Good preparation can safeguard a business against the vicissitudes of life. It is important to have a realistic view of the potential for development. Furthermore, it is fundamental to see problems as opportunities and to not be discouraged by setbacks.

## **2.4.2 Resilience in the tourism sector**

The tourism industry is upon the industries that have been influenced the most by the Covid-19 crisis (Behsudi, 2020). In the aftermath of the crisis, the industry is going to face an increased need for security and trust from the tourist's standpoint. It does not matter whether it is a vacation or a business trip, the future of tourism is becoming a question of quality, and the parameters will be different (Zukunftsinstitut GmbH, 2020). An important aspect for tourism destinations and providers is to restore the relationship of trust with travelers. At the beginning of the Covid-19 crisis the news often showed incarcerated guests in hotels, deaths on cruise ships and guests stranded abroad. Given this background, regional tourism will initially gain in attractiveness (Kirig, n.D.). Short distances and local recreation convey a sense of security.

Disruptive events such as the immigration of new diseases, absence of precipitation for several weeks, the eruption of supposedly extinct volcanoes must be equally expected, as well as already known disruptive events such as floods. This reflects the basic idea of the resilience concept as businesses and individuals need to have the capacity to recover quickly from difficulties. A company can be described as resilient if they are able continue to produce or provide their services despite the impact of an unexpected event as mentioned in the examples (Pedell, Seidenschwarz, & Sondermann, 2020).

Especially in the tourism industry it is important to be prepared for crises as the industry depends on people coming to a destination. Natural disasters, for example, can damage or even destroy the natural unique selling proposition of a destination. Furthermore, through social changes, the wishes and needs of guests in a tourism region can also change over the years. Hence, the tourism industry must be able to react successfully to all kinds of changes if they want to be successful on the market in the long term with their offer or with their destination (Zeppenfeld, et al., 2016). A famous quote of Charles Robert Darwin (1809-1882) states: "It is not the strongest or the most intelligent species that will survive, but those that adapt the fastest." This statement can also be said about the tourism industry. In the future it is going to be important to be able to adapt quickly to changes.

### **3 Methodology**

The goal of this thesis is to explore to what extent Austrian holiday hotel owners' value and apply climate change mitigation and adaptation measures as well as how they are affected by the Covid-19 pandemic. As stated in the introduction, the guiding research question of the thesis is:

To what extent are climate change mitigation and adaptation measures in the hotel industry affected by the Covid-19 crisis, and how do hotel owners work against climate change during and after the Covid-19 crisis?

The exploration of the literature review has revealed that there is a substantial amount of literature on the topic of climate change and pandemics and their effect on the hotel industry. Nevertheless, the literature lacks the aspect of the perception of hotel owners on the two major threats on the industry. Hence, this aspect will be explored through the use of qualitative research. Tyrol, a federal state of Austria, is the location of interest, in which primary qualitative data was collected. Tyrol is one of the main representatives of the alpine tourism in Austria, where estimated amount of approximately 57% of the population are employed in the tourism industry in this particular federal state of Austria (Trawöger, 2014). The region has the largest tourism sector throughout Austria in terms of value added and employment (Fenz, Stix, & Vondra, 2021). Therefore, one can conceive how badly the region was hit by the Covid-19 crisis. Semi-structured interviews with experts were used in order to gather the data which will be used to answer the research question. Interviews are in particular beneficial in order to gain an in-depth understanding of different opinions or perceptions on the studied matter.

#### **3.1 Method of data collection**

In order to collect primary data three different research methods can be realized. These are: qualitative, quantitative and mixed methods research (Creswell, 2014). Qualitative research focuses on individual opinions and experiences of the participants. The method uses case studies, narrative research, ethnography, grounded theory and phenomenological research. Quantitative research tests the relationship between measurable variables through surveys or experiments. Mixed methods integrates both qualitative and

quantitative data. This helps the researcher to gain a broader overview of findings of a given research problem. The mixed methods method approach is useful in a scenario where neither qualitative nor quantitative research will provide the researcher with sufficient information about the researched variables, therefore a mix of both methods is used (Creswell, 2014). The choice of the fitting design used in a research, is influenced by a combination of the chosen audience, the research problem that is analyzed and the researchers experience (Creswell, 2014).

This research focuses on collecting qualitative primary data by conducting semi-structured expert interviews to answer the research question “to what extent are climate change mitigation and adaptation measures in the hotel industry affected by the Covid-19 crisis, and how do hotel owners work against climate change during and after the Covid-19 crisis?”.

A total of 10 hotel owners were interviewed in order to get an understanding of how they perceive and value measures targeting climate change and the Covid-19 pandemic. As this paper focuses on the qualitative research approach, this allows the researcher to gain first-hand knowledge and new insights into the research problem. Qualitative research is also often referred as more subjective and flexible. Due to the current pandemic situation and the enduring curfew, the interviews were conducted via telephone and Microsoft Team. The advantage of doing the interviews via phone and MS Teams was that the interviewer did not have to ask for permission to use a particular venue for the interview. The interviewees were given full control over the time and format of the interview in order to make them feel comfortable. All interviews were held in German as this is the language the interviewees were most comfortable with. The average interview length amounted to 21 minutes. All interviews were recorded using the phone application Voice Memos. Every participant was asked beforehand for permission of the recording. Recording the interviews allowed the researcher to fully focus on the interview. A printed questionnaire was always set prior to each interview in order to be able to take notes and to capture the emotions and pitches of the interviewees. The interviewer sent the questionnaire to the experts prior to the interview so that they were able to be prepared and be able to give in-depth perceptions. At the beginning of each interview, the interviewer briefly introduced themselves and



the bachelor thesis. Furthermore, the interviewees were informed how the collected data will be processed and what it will be used for.

After each interview the interviewer wrote down a minutes' protocol using the assistance of the audio file. The minutes are included in the appendix of this bachelor thesis.

Figure 9 illustrates the study area where the expert interviews were carried out. The region is located in the western part of Austria.



*Figure 9: Sketch map of the analyzed area (Map Austria, 2007)*

### **3.1.1 Semi-structured expert interviews**

Interviews can be conducted in an open, semi-structured or structured manner (Weßel, 2010). According to Lofland & Lofland (1995) an interview is a directed conversation. Nevertheless, unlike common conversations an interview has the purpose to elicit explicit kind of information.

Open interviews begin with an introductory question, on which the interviewee comments without further major interventions by the interviewer. This type of interview is especially applied in the psychological environment. Structured interviews are based on a catalog of open and closed questions, where the

order of the questions is already determined. This type of interview makes use of a questionnaire during the conversation with the interviewee.

This thesis applies a qualitative research approach using semi-structured interviews. Semi-structured interviews are carried out with the use of a guideline. Therefore, they are also called guideline-based interviews (Weßel, 2010). A list of open-ended questions guides the interviewer through the meeting without having an answer format and straightforward questions. In most cases the interviewee is considered an expert in the field. This is also the origin of the term or synonym expert interviews for semi-structured interviews. A semi-structured interview enables two things for the researcher. Firstly, on the basis of the interview guide, the interviewer can control the topics and process of the interview allowing a discussion with the interviewee. Secondly, the interviewee is not bound to a determined questionnaire but can speak freely. This gives the interviewee freedom to describe problems as well as ideas for solutions. This is especially important for the researcher as often new knowledge can be best derived from a two-way communication resulting in a comprehensive discussion.

Two major advantages of expert interviews will benefit this study (Opdenakker, 2006). On the one hand, experts have specific knowledge and insight into the field. This is very useful for this particular research as the information is difficult to be explored through other processes. On the other hand, experts tend to be motivated and willing to cooperate. The chosen interview partners could give insights of future events as well as trends. In addition to this, their opinion about the Covid-19 crisis and the effect on climate change mitigation and adaptation measures, will give a deeper understanding of the topic.

The following 9 steps, recommended by DeJonckheere and Vaughn (2019), were followed in this thesis to plan and conduct the semi-structured interviews:

1. Determining the purpose and scope of the study

Formulating the objective of the study as well as the scope based on literature review in order to respond to an identified research gap that needs further research.

## 2. Identifying participants

After defining the purpose and scope of the study the researcher needs to identify *who* is able to provide adequate information in order to be able to answer the research question.

## 3. Considering ethical issues

The researcher needs to have an ethical attitude that integrates respect, discretion and sensitivity throughout the research process especially towards the interviewees.

## 4. Planning logistical aspects

The researcher needs to arrange convenient interview times with the interviewees as well as the recording equipment. A setting with privacy and silence are of importance for audio-recording clarity. The researcher needs reliable and easy to use audio-recording equipment. Some researchers also recommend note taking on the side as a backup and to ensure that all questions have been answered.

## 5. Developing the interview guide

When the researcher has decided on the information needed to be gathered, a well elaborated interview guideline should be developed. This guideline should contain the key topics which were addressed in the literature review. This will help the interviewer to monitor and control the firmness throughout the interview. The main sections of an interview guide are the face sheet, the core questions as well as the follow up questions and lastly a comment sheet.

## 6. Conducting the interview

The interviewer starts with a short introduction and needs to inform the participants that audio recording is used for data collection so that they can refuse to be recorded if they prefer. The main responsibility of the interviewer is to listen actively and to observe the interviewee.

#### 7. Analyzing the data

Themes will be identified from the stitch word protocol. In case not all questions have been sufficiently answered, more interviews should be conducted.

#### 8. Demonstrating the trustworthiness of the research

The information needs to be assessed for credibility, transferability, dependability and confirmability.

#### 9. Presenting findings in a paper or report

The interview data will be presented through the integration of quotes as well as an in-depth description of the participants perspectives

### **3.1.2 Development of Interview Questions**

The aim of the semi-structured interviews is to understand the extent to which holiday hotel owners are familiar with climate change mitigation and adaptation measures and how they work against the climate change issue individually in the tourism region of Tyrol. Furthermore, the objective is to find out to what extent the climate change mitigation and adaptation measures are affected by the Covid-19 crisis. The interviews aimed to elicit information from the owners on how a hotel can position itself resiliently for the future and which strategies in terms of mitigation and adaptation strategies will be implemented in the next 2-3 years. In order to generate the most output, the interview guideline was divided into three main sections, to ensure a clear overview for the interviewees. The interview included open-ended and semi-structured questions.

The first section elicits general starting information regarding the hotel size, if the hotel has already obtained an eco-label or something similar, the position of the interviewee, if they own more than one hotel and how many employees work for them. In order to classify the hotels, a standard classification was chosen where the hotels will be allocated accordingly (Buhalis, 2004). The scale is as follows:

- Small: 20 – 50 rooms
- Medium: 51 – 100 rooms
- Large: > 100 rooms

The second section consults the effect of Covid-19 on their establishment and to what extent the corresponding protection measures introduced by the government are accepted or not.

In the third section, the interviewees are asked questions regarding the climate change effects. On the one hand hotel managers are consulted how the hotel manages different climate change mitigation and adaption measures. On the other hand, the researcher asks questions concerning the Covid-19 crisis and the effect on the hotel's climate change management to explore potential issues. Furthermore, the topic of resilience and which climate change measures are planned in the near future were touched at the end of the interview.

The interview questions are listed below in Table 5.

<b>General</b>	
Label	Is sustainability an important topic to you and do you already have an eco-label or something similar? /
Position	What is your position in the Hotel?
Hotel size	How many rooms do you have in your hotel?
More hotels?	Do you own more than one hotel? If yes, how many?
Employees	How many employees do you have in your hotel?
<b>COVID-19</b>	How does Covid 19 affect your business and what are the biggest challenges?
	Which Covid 19 measures do you think are useful or not useful, and which measures can be improved or are there better measures they would like to see?

<b>Climate change</b>	In addition to the Covid crisis there is also the climate crisis. Does your hotel adapt already on the effects of climate change?
	If any, which measures do you have in place to take action against the climate change crisis?
	a) To what extent are your climate change measures subsidized by the government and public authorities, and how important is this to you? b) If the hotel has no measures against the climate change crisis in place: What is the reason that your hotel has no measures targeting climate change?
	A) Has the issue of climate change become more important to you because of the Covid-19 crisis, or has it rather faded into the background? B) Why did the issue become more important? OR Why did it fade into the background?
	Did the Covid-19 crisis affect the implementation of climate change strategies in your business?
	If any, which climate change measures will your business implement in the next 2-3 years?
	In your opinion, what are the most important measures in your hotel to become resiliently for the future?

*Table 5: Interview Questions*

### **3.1.2.1 Sampling Method**

The sampling method which was used for the semi-structured interviews is called 'convenience sampling'. According to Dörnyei (2007) this sampling method is a non-probability or nonrandom sampling method where a researcher chooses a sample of a specific target population for the purpose of

the study. The convenience sampling method was important for this study as only hotel owners were interviewed. In order to provide a representation of the holiday hotel industry in Tyrol a balanced amount of 3 - 5-star hotels were chosen.

One strength of convenience sampling is that it enables the interviewer easy access to the participants. Nevertheless, a key disadvantage of the sampling method is that it lacks generalizability, meaning that the data cannot be applied to the whole population. This reveals another weakness, as the results could be biased and there is a chance of an under- or over-representation of a population.

### **3.1.2.2 Target Population**

The target population of this bachelor thesis were owners of a holiday hotel that are located in Tyrol, Austria. Hotels with different star-ratings were chosen, to provide a more complete picture of the holiday hotel industry population.

Holiday hotels were chosen over business hotels as Tyrol is amongst the most attractive tourism destination with high development potential in Austria. Moreover, as tourism is such a prominent industry in Tyrol the holiday hotels contribute significantly to climate change.

### **3.1.2.3 Sample size**

The interviews were held with 10 people owning a holiday hotel in Tyrol with different star-rating categories. Ten participants were chosen due to a number of factors being, the scope of the study, the amount of useful information obtained from each participant, the nature of the topic and the quality of the data (Morse, 2000). Moreover, as the chosen participants were highly experienced and were able to reflect on the topic in depth, fewer participants were required to reach saturation.

### **3.2 Method of data analysis**

The method of data analysis used in this thesis is the content analysis. This analysis method aims to identify patterns in recorded communication (Hsieh & Shannon, 2005).

The data analysis process is structured into three main parts. Firstly, the gathered data will be compared and categorized. The categorization of the data can be described as coding. This means that the interviews are analysed by giving “codes” to key words and key phrases in the interview. Coding is useful to compare and group comparable and linked pieces of information. These different groups will be listed on a code sheet.

Secondly, after the data is coded it is necessary to identify repetitive themes. Especially important are themes that have differences, similarities and theory-related materials which can be traced back to the literature findings in the literature review section. As the data creates the basis of this thesis, it is important to validate it and to compare it to already existing studies.

Those steps are important to gain a deeper insight in terms of the meaning of the data. In addition to this, the data will be condensed so that the most important information for the research is utilized. After the key points for the analysis are being established, charts, tables and figures are created to visualize the data.

The last step of the data analysis is to draw conclusions of the findings and to analyze potential outliers and mistakes which were made in the methodology. The benefit of this method of analysis is that it follows a systematic procedure, which makes it transparent and replicable. Furthermore, content analysis is highly flexible as the researcher just needs access to appropriate sources and can conduct it in any location at any time (Forman & Damschroder, 2007).

However, there are also weaknesses that come with this method of analysis, as it may involve some level of subjective interpretation that can affect the reliability of the results (Hsieh & Shannon, 2005).



### **3.3 Ethical Issues**

During this research ethical concerns like informed consent, voluntary participation and confidentiality were taken into account (Orb, Eisenhauer, & Wynaden, 2001). It is important to consider such ethical issues as they could harm the participants emotionally (Showkat & Parveen, 2007).

The term 'informed consent' refers to the idea that each individual taking part in the interview is aware of the nature of the research. The participants must be informed about the project's purpose, how the results are utilized and who will have access to the findings (Munhall, 1988). Secondly, confidentiality means that the researcher does not share the obtained information with anyone in order to protect the privacy of the participants. Confidentiality is important to build trust and establish a relationship with the study participants (Munhall, 1988). Lastly, participants were asked beforehand if they are willing to participate and had the right to withdraw their participation at any time.

In addition, participants will be given access to the recordings as well as the final research paper if desired, in order to provide transparency. Finally, the interviews were anonymized, meaning that the identity of the participants remains unknown, which was communicated to all interview partners.

### **3.4 Limitations**

Besides having mentioned the ethical issues of the study, there are also limitations that have to be considered. The potential weaknesses of this study can be categorized into two groups. On the one hand limitations may result from methodology and on the other hand, they can arise through the researcher.

Since a convenience sampling approach was used in this work, one has to consider the limitations associated with it. This sampling method may result in a sampling error as the selected hotel owners may not reflect the general population, which could result in a selection bias. Another methodological limitation is that the qualitative research method could have resulted in a rather small sample size in comparison to other methods, like surveys or questionnaires (Showkat & Parveen, 2007).

Limitations concerning the researcher, could be in terms of the interview setting. Respondents may have answered some questions incorrectly due to a misunderstanding of the questions. Therefore, it was important for the researcher to state the questions in a manner that everyone can understand and answer (Showkat & Parveen, 2007).

## **4 Findings**

This section focuses on the discoveries of the semi-structured expert interviews, that have been conducted as part of this thesis' qualitative, primary research approach. Throughout the chapter the interviews are analysed, and the main patterns identified. Each subsection focuses on one or two sub-research questions, which are answered accordingly. To answer the sub-research questions, the opinions and feelings of the sample population are analysed. As mentioned previously in the methodology the sample population is represented by owners of a holiday hotel that are located in Tyrol, Austria.

### **4.1 Effect of Covid 19 on the holiday industry**

The first pattern that was detected during the interviews was that all hotel owners were forced to close their hotels immediately on the 16<sup>th</sup> of March 2020 as highlighted in the literature review chapter 'Covid-19 effect on tourism industry'. Furthermore, this is supported in Table 3 in the literature review section 2.3.3 as one of the nationwide measures according to the official homepage of the 'Corona Ampel'. This meant that the hotels had a ban on entering all facilities and were not able to carry out their normal business activities. Due to the continuous prolongment of the lockdowns, this created problems such as lack of planning options.

One of the main challenges was to maintain contact with the regular guests, as there were no touchpoints during the pandemic. The majority of participants agreed with the statement that, the contact to the regular guests is considered very important in order to be able to fill the hotel as quickly as possible in the event of its reopening. However, the respondents also indicated that, it was not only a challenge to keep contact with the regular guests but also to retain the staff in a way so that they don't change sectors.

The participants on the whole demonstrated, that the main challenge was the financial uncertainty, as for most of the interviewees, the hotel represents the only source of income.

Surprisingly, one hotel owner mentioned that the Covid 19 crisis came at the right time and that they were able to benefit of it. The hotel owner stated that “We looked for an investor in order to completely rebuild the hotel and luckily we found one. Under normal circumstances we would have had to close for the duration of the renovation. Due to the Covid 19 crisis we were able to make use of the time and rebuild our hotel. Additionally, we were able to use the financial aids from the government such as the financial loss replacement or revenue replacement for the renovations.” (Werner, 2021)

The information provided above can be used in order to answer the following two sub-research questions:

*1. To what extent did hoteliers perceive the impact of the Covid 19 effects?*

Firstly, one must say that in summary, hoteliers perceived a severe impact on the hospitality industry due to the Covid-19 crisis. As mentioned in the literature review the crisis was a major setback for the industry. One interviewee even said that they will remember the 13<sup>th</sup> of March for a lifetime when they had to close down the first time in their life.

*2. What were the greatest challenges?*

The ultimate challenge for the majority of the holiday hotels within Tyrol, was the immediate closure of all facilities and the subsequent lack of planning options. This was the root cause for problems such as financial instability, missing contact to regular guests and preservation of the employees.

As a mitigation measure to alleviate the financial uncertainty, many hotels had to extend the terms of their loans and even added new loans in order to maintain their hotels. One interviewee reported that their hotel tried to capture turnover losses with the help of government aid but described it as a difficult process because of the bureaucracy.

## **4.2 Usefulness of Covid 19 measures**

In response to the question, if the different Covid 19 measures that were imposed by the government are useful, most of those interviewees indicated

that both the financial aid measures together with the hygiene measures such as keeping a distance, masks and regular testing are important and seen as beneficial. As mentioned in the literature review the Austrian government introduced the first Covid-19 measures in March 2020 to contain the pandemic but also to help nationwide businesses to survive.

When the participants were asked which financial aid is seen as most beneficial, the majority commented that it was the corona short time working model. By making use of this aid, the hotels were able to keep their employees in the company and therefore, dismissals were able to be avoided. However, there were some negative comments about the 'Financial loss' and 'Revenue replacement' aid. Some interviewees felt that small establishments have received more than they could have dreamed of, and for large establishments the loss was proportionately greater. In addition, interviewees mentioned that it is very difficult to get the money due to bureaucracy and therefore, they did not receive any aids yet. Some interviewees felt that the financial aids were rather quick shots from the government, while others considered them as necessary for survival, because without them they would no longer exist. The financial aids for the hotel industry are explained in the literature review chapter 2.3.4. Surprisingly, none of the participants referred to financial support measures offered by of the Province of Tyrol as stated in the literature review. A possible explanation for this could be, on the one hand, the overwhelming number of different aids and, on the other hand, the difficult bureaucratic process to get the money, as mentioned by the respondents. A small number of those interviewed suggested that, the lockdowns would have been more effective if there was a uniform procedure for the whole of Austria or even for the whole European Union. The respondents referred to New Zealand as an example, which eliminated all Covid-19 cases by locking down the whole country with strict lockdowns and austerity. The majority of participants agreed with the statement that they wish for a more localized approach and branches where tests can be carried out should be allowed to open. Furthermore, all agree that the government needs to give them a perspective that can be communicated to the regular guests.

The information above levels the ground to answer the following sub-research questions:

1. *Which Covid-19 measures are seen as useful?*

2. *Where can improvements be made?*

Whilst only a few interviewees mentioned that the majority of financial aid measures were not useful due to heavy bureaucracy and unfair distribution, all agreed that the hygiene measures are valued and important for opening steps. There were some suggestions that the government should take a more localized approach and open regions with low incidence values. As mentioned in the literature review, as of April 2021 Austria still had nationwide measures with the exception of high incidence areas. The hotel owners argued that they wish for a perspective that can be communicated to the guests. This statement overlaps with the findings of chapter 4.1. The researcher concludes that the missing planning options were one of the main challenges and the respondents wish for improvement regarding this issue.

### **4.3 Climate change mitigation and adaptation measures in the holiday hotel industry**

This section focuses on two questions that were asked during the interview. Firstly, the respondents were asked to give information on how their hotels adapt to climate change. After that, they were asked which measures the hotels have in place to take action against the climate change crisis.

The most sticking result was that the hotel owners generally agreed that sustainability is a topic of importance but none of the interviewed hotels have an ecolabel. One hotel had a certificate called 'Bewusst Tirol', which promotes the use of local food in Tyrolean hotels and restaurants and strengthens the cooperation between tourism and agriculture (Tirol, n.D.). In general, a common view amongst interviewees was that implementing various climate change measures is a long process with many options and opportunities. As stated in the literature review, integrating the SDGs can be very beneficial for building resilience. Sustainable development is gaining importance as it is the responsible use of resources. This is especially important from hotels in order to preserve local resources as well as the culture and social-economic stability of the host community. Additionally, it is important to assess the technological development before implementing new measures and to validate all options available. Climate change measure investments have the potential to save

money and enhance efficiency in the future but are costly at the beginning. To make these investments more attractive the governments offer subsidies to people who are interested. This will be further elaborated later on. Furthermore, all interviewees support sustainability and generally try everything to implement measures that reduce CO<sub>2</sub> levels. Interestingly, one interviewee launched a foundation called 'Everyone for climate', which targets climate protection in tourism in order to reduce the ecological footprint of the industry. The partnering hotels voluntarily donate 1 Euro per guest per night to the foundation. Everyone for Climate collects the so-called climate euro and invests the money in organizations and projects to support climate protection (Foundation everyone for climate, n.D.).

Two broad themes emerged from the analysis of the interviews, which are: mitigation and adaptation measures. A minority of participants (30%) indicated that they are not interested in taking action against climate change within their establishments. These participants indicated that they have either none or very little measures in place. Interestingly, these respondents own very small hotels with 3 to 4 stars. When they were asked why they are not interested in measures to adapt or counteract against climate change, the majority commented that they are lucky with the location of Tyrol. On the one hand the summer tourism benefits as the area does not experience heat stress yet, and on the other hand they have no problem in winter yet due to the high altitude. As mentioned in the literature review, prior studies reported summer tourism will generally benefit from higher altitude. Hence, the respondents feel like they do not have to react for now. Concerns were expressed about the costs of several measures being too high. These were seen as neither affordable nor profitable for small hotels.

Among the other interviewees the themes of mitigation and adaptation recurred throughout the collected data. Figure 10 below displays the most frequently mentioned mitigation and adaptation measures that are in place in the interviewees hotels to take action against the climate change crisis. With the information in Figure 10 the researcher is able to answer the following sub-question: Which climate change measures are applied and implemented by hotel owners?

As mentioned in the literature review, mitigation measures refer to actions to reduce emissions. Adaptation measures address the impacts of climate change and try to reduce the vulnerability to the consequences of the crisis.

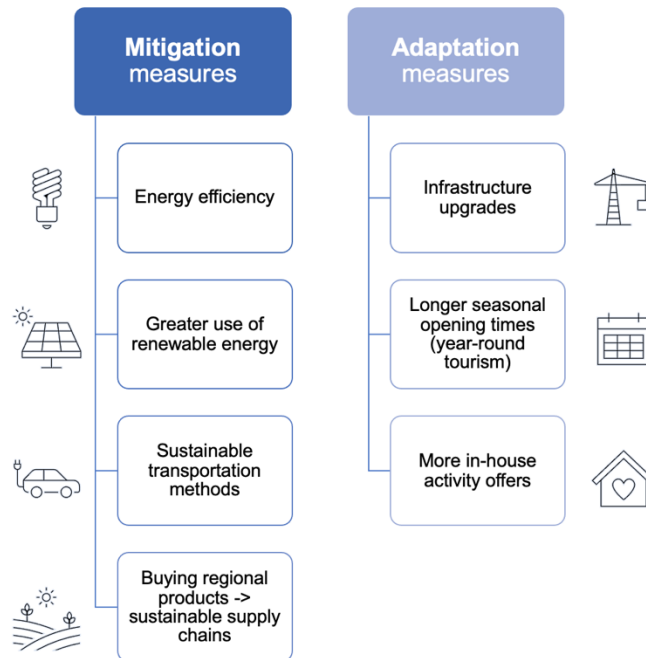


Figure 10: The most frequently mentioned mitigation and adaptation measures by the interviewees

Nearly all of the respondents that take action against climate change noted that their establishment attaches great importance to being energy efficient. To reach this goal almost two-thirds of them said that it is necessary to engage both staff and guests for more effective results. In addition, most of them indicated that their hotels switched to more efficient lighting by means of energy saving bulbs and LEDs. Furthermore, one informant reported that their establishment makes use of measuring instruments which control electricity and water consumption.

Another mitigation strategy that was alluded multiple times throughout the interviews was the use of renewable energy. Most of the hotels have already installed solar and photovoltaic systems or have planned it for the near future. Another popular mitigation measure among the interviewees is the use of sustainable transportation methods. It was suggested that more hotels should buy electric vehicles to drive guests from the place of arrival to the hotel or also

for advertised excursions. In addition, one participant commented: “Due to excellent transport links and an ideal location, the holiday region Tyrol is easily accessible not only by car but also by train. This makes it possible to travel with a CO<sub>2</sub> footprint as small as possible” (Pirktl, 2021). The participant highlighted that due to this reason they have installed five superchargers for electric cars to make the hotel more attractive to guests using such cars. Another common view amongst interviewees was that almost two-thirds agreed on the importance of buying regional food and services and hence supporting sustainable supply chains. Nevertheless, concerns were expressed about only buying regional food products as guests in luxurious hotels expect a wide variety of food including exotic fruits for example.

The second part of the interview question addressed the adaptation measures. Among the interviewees that react to climate change the most common adaptation measure is the upgrade to their existing infrastructures. This includes better isolation techniques to keep the buildings cool during summer and warm during winter. Another recurring response, especially from interviewees from snow-dependent areas, was that they already focus on longer seasonal opening times in order to secure sufficient revenue. Interviewees said that due to the fact that climate change is unpredictable their hotels need to focus on the creation of more in-house activity offers that are not dependent on the weather. These results reflect those of Hallegatte (2016) who predicted unforeseeable extreme weather events due to climate change. Lastly, the respondents highlighted the importance of educating the guests, staff and people from the local community on climate change adaptation. This includes measures like water conservation measures or composting biodegradable waste. Interestingly, one hotel developed and implemented training programs on climate change mitigation and adaptation strategies for their staff members.

In summary, these results show that the majority of the hotels have mitigation as well as adaptation measures to counteract climate change in place. Even though, three out of ten respondents indicated that they do not attach importance to these measures as they are too expensive and not profitable for them, this outcome coincides with the researcher first hypothesis which states: Large hotels implement more measures against climate change than small



hotels due to greater financial security and thus increased investment possibilities.

#### **4.4 Covid-19 crisis effect on climate change strategies**

The researcher's goal for this section was to find out whether the Covid-19 crisis had an effect on the implementation of climate change strategies in the interviewed holiday hotels or not.

Firstly, the respondents were asked if they had the feeling that the issue of climate change has become more important to them due to the Covid-19 crisis, or if it has rather faded into the background. Surprisingly, not a single interviewee felt like that the topic of climate change has gained in significance during the crisis. Whilst a minority mentioned that the issue has the same importance as before, 7 out of 10 participants agreed that it has faded into the background. Some interviewees argued that on the one hand, the topic slid into the background due to the lack of planning options and on the other hand, the challenges of the crisis were so demanding for the hoteliers that they didn't have time for other projects. This view was echoed by another participant who reported that all planned projects, to become more eco-friendly have been thrown over the hill because they had to take care their existence first.

The second question targeted the effect of Covid-19 on the implementation of the climate change strategies directly. Interestingly, the responses were very balanced. Four respondents answered with 'Yes' the strategies were extremely affected, three respondents said 'No' Covid-19 did not have an effect on them at all, and three stated that they are not sure as they are not interested in climate change strategies. The latter was stated by respondents of small hotels with 3-4 stars. They said that they don't want to and cannot implement any measures as they lack the necessary financial security and have no perspective due to the crisis. Some hotel owners of large hotels argued that the crisis had a massive effect, while others said that the Covid-19 crisis has nothing to do with the climate change strategies and they are anyhow part of their hotel strategy. Thus, they want to do something in order to counteract climate change. According to the interviewees who perceive that Covid-19 had a big impact on their hotel strategies concerning climate change, said that the

newly introduced hygiene measures are the cause for significantly more waste (masks, disposable gloves) in hotels, which completely works against climate change protection measures. Furthermore, due to the distance compliance, hotels have experienced an increase in energy consumption for services such as private saunas. In addition, they need more vehicles to transport the guests as only 5 people are allowed in a 9-seater van.

Overall, these results indicate that the opinions of the sample population provided very differentiated views on the effect of the Covid-19 crisis and the implementation of the climate change strategies. Nevertheless, these results suggest that there is an association between small hotels and their tendency to not feeling affected concerning their implementation of climate change strategies as most of them had no in planning. The large luxurious hotels, which pay great attention to the implementation of climate change strategies felt like the Covid-19 crisis has stood in the way of their climate change strategy goals.

In order to answer the question if the Covid-19 crisis affected the hotel's mitigation and adaptation strategies positively or negatively, one can say that the interview results showed that large hotels felt a more negative effect than small hotels. Overall, one can say that hotels had to carefully manage their available resources throughout the Covid-19 crisis. Due to the lack of income, they had less funds available to spend on climate change strategies. Besides the financial instability, many hotels had to either pause or set their strategies to zero for the time being due to the lack of planning options.

#### **4.5 Support by public authorities**

The following section includes interview answers concerning the importance of financial support offered by public authorities. Respondents were asked to indicate whether financial support in form of subsidies is important for them or not. The overall response to this question was very positive. The majority of interviewees responded that subsidies are important to them and advocate the opinion that the financial support acts as an incentive to make investments that benefit their climate change mitigation and adaptation strategies. As mentioned in the literature review, subsidies are a monetary benefit granted by the government or by EU institutions.

Almost two-thirds of the participants (64%) said that they have received subsidies for a photovoltaic solar panel installation, an electric vehicle charging station or electric vehicle and also for digitalization in their establishment from the digitalization funding program. The interviewee explained that the aim of the Tyrolean digitization funding is to support Tyrolean companies in introducing the latest digital technologies, including training measures for employees. Interestingly, the opinion of the small 3–4-star hotels is highly ambiguous. Some felt that subsidies are very important and the more they get, the more can be implemented. In addition, one respondent mentioned that, it is an incentive but if the investment doesn't pay off within 4-5 years it is not attractive as the financial benefit is valued more than the climate aspect. Others contemplated that subsidies are just for the large hotels and is too complicated for the small ones to acquire.

Taken together, these results suggest that there is an association between the importance of subsidies and the incentive for investments to counteract climate change. The majority of the interviewees makes use of subsidies for renewable energy solutions and digitalization. In addition, the results indicate that a subsidy is an important motivator many hotel owners to implement new climate change measures.

In conclusion one can say that, support and subsidies offered by public authorities to hotel owners are important and act as an incentive in order to make the implementation of climate change measures more attractive.

#### **4.6 Resilience in the holiday hotel industry and future outlooks**

In the final part of the interview, respondents were asked which climate change measures will be implemented by them in the next 2-3 years and which measures are important to become resilient for the future.

When asked whether the hotel owners have climate change measures planned for the next 2-3 years, 70% of the respondents reported that they do have intentions to implement new ones. 30% of the interviewees stated that they have nothing planned yet. One of them, a 3-star hotel owner said that they have

to survive the crisis first but if there are reasonable offers, in terms of subsidies, they will think about it. Most of the hotel owners that said they will implement new measures in the next 2-3 years, plan to realize new mitigation measures. Some interviewees argued that they will acquire new electric cars for their vehicle fleet, while others said that they want to work towards a CO<sub>2</sub> neutrality for the hotel and therefore plan to invest in renewable energy measures. Furthermore, a recurrent theme amongst the interviewees was that they emphasize the use of regional products and especially want to pay attention to this in the next 2-3 years.

Some adaptation strategies were also mentioned throughout the interviews. Four interviewees said that they are planning some renovations, which aim to adapt to temperature extremes and should also be more energy efficient. One interviewee claimed that they will choose the construction materials in a way that they are partly reusable and can also be recycled in an environmentally friendly way. Additionally, there were some suggestions that hotels need to raise awareness regarding climate change among their employees as well as their guests. Interestingly, one interviewee argued that in the near future their guests will receive an information sheet on their CO<sub>2</sub> footprint upon arrival to raise awareness of the issue.

With respect to the last research question, it was found that the participants were unanimous that in the future it will be important to offer flexible services, so that guests can choose a package which is most suitable for them. In addition, the participants agreed that more in-house options and activities, which are weather independent will gain importance. The interviewees of hotels that are dependent on snow argued that they will offer year-round tourism to be able to generate enough revenue to compensate for times with less snow and therefore fewer guests.

Interestingly, some of the seven pillars of resilience from Bathen-Gabriel (2017) were a recurring topic throughout the data set even though the participants were not informed about its existence. Figure 7 in the literature review shows the Seven Pillars of Resilience.

One interviewee mentioned that 'Optimism' is an important trait which can help to overcome a crisis. Another participant argued that the 'Acceptance' of a crisis is vital in order to make the best out of it and also ideally benefit from it.

One interviewee mentioned that the Covid-19 crisis gave the team a challenge to accept which was seen as an opportunity to grow. It was important for them to approach the crisis as a team that works towards a goal that solves the problem. In retrospect, even though the Covid-19 crisis was very challenging and not easy to solve, the interviewee said that they are "grateful for being given the opportunity to grow" (Pirktl, 2021).

Regarding the third pillar, being 'Solution Oriented', the interviewees provided some examples how to approach and tackle problems that could arise from the climate change crisis or other crises. Some solution-oriented thoughts of the informants included to support regionality of products in order to be as independent as possible from worldwide crises, to provide mutual help and learning to each other and also to be socially strong. This also leads to the pillar of network orientation, which states the importance of a stable social environment to find ways out of the crisis. As mentioned previously, the hotel owners struggled to keep contact to their employees as well as regular guests. An interviewee stated that especially for the employees a stable network, that supports one in times of crises is very important. For many people that are employed in the hospitality sector, the Covid-19 crisis caused fear of a personal economic crisis due to a perceived job insecurity and mental health issues. Therefore, support from a stable network including their employer is very important in such times.

Finally, the last pillar that was mentioned by the interviewees was the pillar of future planning. This is represented by the first question of the section which asked about the measures that will be implemented by the hotel owners in the next 2-3 years. In addition to the measures already mentioned, some respondents stressed the importance of identifying the hotel's biggest weaknesses in order to be able to address them in the event of a future crisis. Whilst a minority mentioned that climate change does not affect Austria yet and therefore, they don't feel like there is a need to implement major changes at the moment, all agreed that in the future it will be important to develop products

and services that allow the tourists to enjoy their holidays regardless of the weather.

In summary, most hotel owners have planned some climate change measures to be implemented in the next 2-3 years. Some respondents from small hotels said that they first need to get through the crisis and then they can think about the next steps, including climate change measures. Therefore, they have not planned anything yet. These results provide further support for the hypothesis that larger and more luxurious hotels are able to implement and plan more climate change measures due to greater financial security.

Furthermore, the results in this chapter show that respondents unconsciously refer to the seven pillars of resilience as listed above. While some of them who own winter tourism hotels stated that it will be important to additionally open the hotels for summer tourism in the future, all agreed that it is important to be weather independent. Another important resilience factor that emerged throughout the data set is the fact of consciously communicating climate action to guests to promote understanding and importance of the issue.

## **5 Conclusion and Recommendations**

The aim of this research was to investigate, the extent to which mitigation and adaptation measures in the hotel industry are affected by the Covid 19 crisis on the one side and how hotel owners work against climate change during and after the Covid 19 crisis on the other side. Relevant information was gathered from hoteliers in the region of Tyrol to learn how they were affected by the pandemic and whether they work against climate change or not. For the purpose of collecting qualitative data on the subject, semi-structured interviews were conducted with ten owners of holiday hotels in Tyrol.

As the literature review shows, the issue of climate change is a topic that has been dealt with extensively and broadly in the scientific community. Yet, there are only limited qualitative sources dealing with the implementation of adaptation and mitigation strategies to combat climate change in the alpine holiday hotel tourism industry and how hotels individually work against the crisis. In addition, the new global Covid 19 pandemic also impacts the hotel

industry and thus its mitigation and adaptation strategies to combat climate change. Therefore, this study aims to fill the knowledge gap in academia how the pandemic impacts the industry and their strategies to address the climate change issue. The results of the study can further assist hoteliers and other stakeholders in the tourism industry to gain a better understanding on the impacts of the pandemic on climate change mitigation and adaptation strategies and to prepare for future crises, or in other words, to be resilient. In addition, this research could also serve as a call to action or the tourism region of Tyrol as it is vital to address the issue of climate change more seriously and to enhance the understanding of its impacts. Since tourism is the most significant source of income in Tyrol, it is important to prepare for future scenarios such as winter seasons with little or no snow and to develop suitable solutions. As the year 2020 has shown, unexpected crises can always occur for which no one is prepared, and which can cause considerable damage. Therefore, an important factor for the future is to be resilient, as discussed in the study.

During the interviews, clear patterns could be identified. To start, the most obvious finding to emerge from this study is that all hoteliers perceived a severe impact on the hospitality industry due to the Covid-19 crisis. All hotels were equally affected as the government has imposed entry bans on their establishments. It can be said that it became evident in the interviews that all hotel owners faced several challenges, but the financial challenges were the most noticeable. Moreover, it can be concluded that hotel owners are on the whole working against climate change by implementing mitigation and adaptation measures, with a few exceptions of very small hotels that are more focused on their revenues than on the issue of climate change. When considering new measures, the majority of the respondents highlighted the importance of subsidies. These enable new investments, which are often very costly. Apart from the fact that none of the hotels carries an eco-label, which is not considered that important by the hoteliers, the majority of the hotels attach great importance to sustainability. This is also why the hoteliers are very much concerned with the topic of resilience. The majority wants to become more independent by placing a lot of emphasis on regional products. Moreover, according to some respondents, informing the guests and employees why certain measures are necessary and involving them in the topic of climate

change is crucial. In the next 2-3 years, most of the respondents want to implement new mitigation measures, such as photovoltaic and solar installations. Most of the smaller hotels have nothing planned yet as they are still struggling with the financial challenges of the Covid-19 pandemic.

This final section uses four points of recommendations for future research conduct. As the thesis shows, holiday hotels in Tyrol have been heavily impacted by the Covid-19 pandemic and will potentially be threatened by climate change. Therefore, two topics of potential future research have emerged. On the one side it would be interesting to compare and contrast holiday hotels with business hotels, as this thesis solely focused on holiday hotels. This would allow for a more detailed analysis. On the other hand, the scale of the investigated area could be extended to the whole of Austria. Furthermore, one could also compare and contrast other alpine regions around the world with those of Austria. This would give a bigger picture and give reason to how different parts of the world are affected by both the pandemic and climate change. Therefore, one can say that this thesis provides a lot of room for future research.

In conclusion one can say that all hotels were equally affected by the Covid-19 crisis due to the entry bans. This confirms the second hypothesis which stated that the Covid-19 crisis affected all hotels equally in terms of lack of perspective, liquidity problems and employee retainment. Furthermore, hotels experienced a negative impact on their planned climate change mitigation and adaptation measures. Due to the pandemic and the resulting lacks planning options the hotels weren't able to implement new measures or had to put some on hold. In addition, due to the newly introduced hygiene measures to combat the pandemic, a significant increase in the volume of waste was noted. Another reason for the impairment of climate protection measures was the fact that the hotels did not have sufficient financial resources for new measures since they had no revenue. Overall, it can be said that the majority of the interviewed hotel owners are working against climate change. However, it is important to emphasize that the results show that large hotels have greater financial capacities to implement more extensive measures. Small hotels are also interested in contributing to the prevention of climate change, but their measures are usually of a smaller scale. This confirms the hypothesis which



was stated in the introduction of the thesis. The researcher has assumed that large hotels implement more measures against climate change than small hotels due to greater financial security and thus increased investment possibilities. While some respondents mentioned that they have concrete plans for climate change mitigation and adaptation measures to be implemented in the future, others said that it is more important to survive the pandemic and its aftermath first.

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## 7 Appendices

### 7.1 Appendix 1 – Interview Partners

Interviewee	Sex	Position	Hotel Stars	Interviewing Mode	Duration (min.)
A	F	Hotel Owner	4*s	Phone Call	17
B	F	Hotel Owner + Head of Quality Management & HR	5	MS Teams	33
C	M	Hotel Owner	5	Phone Call	17
D	F	Hotel Owner	4	MS Teams	10
E	F	Hotel Owner	3	Phone Call	20
F	M	Hotel Owner	4	Phone Call	37
G	F	Hotel Owner	3	Phone Call	13
H	F	Hotel Owner	3	MS Teams	16
I	M	Hotel Owner	5	Phone Call	16
J	M	Hotel Owner	3	Phone Call	15

Table 6: Interview Partner

### 7.2 Appendix 2 – Keyword protocol

#### Frage 1

Is sustainability an important topic to you and do you already have an eco-label or something similar? / **Ist Nachhaltigkeit für Sie ein wichtiges Thema und haben Sie bereits ein Öko-label oder ähnliches?**

Hotel 1	Ja, Auszeichnung bewusst Tirol (für Regionalen Einkauf) – seit 10 Jahren
Hotel 2	Nachhaltigkeit wichtiges Thema (im Mitarbeiterbereich seit über 20 Jahren), Kennzahlen für die Zukunft zu haben wird wichtig sein, sind im Klimabündis Tirol dabei, um voneinander zu lernen, halten nichts von Labels (da sie er kaufbar sind - > Greenwashing)
Hotel 3	Ist ein Thema, Everyone for Climate Stiftung ins Leben gerufen (the Climate Euro) <a href="https://www.everyoneforclimate.org/en">https://www.everyoneforclimate.org/en</a> , CO2-Fußabdruck bestimmt (pro Nacht) Hält nicht viel von Labels

Hotel 4	Nein, weder noch
Hotel 5	Ja sehr wichtiges Thema, aber kein Label und wollen auch keines, schauen sehr drauf die Umwelt nicht zu belasten mit kleinen Dingen, die für sie machbar sind
Hotel 6	Sehr wichtiges Thema, kein Label sind aber dran, Partner von Climate Partners
Hotel 7	Thema aber nicht von großer Bedeutung, kein Label
Hotel 8	Definitiv wichtiges Thema, kein Öko-label
Hotel 9	Ist ein wichtiges Thema, kein Label, wollen durch allgemeine Kommunikation das Nachhaltigkeitsthema in den Vordergrund bringen
Hotel 10	Schon wichtiges Thema aber nicht unbedingt im Betrieb da zu klein, kein Label werden auch keines bekommen

#### Frage 2

What is your position in the Hotel? / Was ist Ihre Position im Hotel?

Hotel 1	Owner
Hotel 2	Owner + Head of Quality Management & HR
Hotel 3	Owner
Hotel 4	Owner
Hotel 5	Owner
Hotel 6	Owner
Hotel 7	Owner
Hotel 8	Owner
Hotel 9	Owner
Hotel 10	Owner

#### Frage 3

How many rooms do you have in your hotel? / Über wie viele Hotel Zimmer verfügt ihr Hotel?

Hotel 1	44
Hotel 2	160
Hotel 3	150
Hotel 4	55
Hotel 5	13, bauen 15 neue diesen Sommer
Hotel 6	86
Hotel 7	38
Hotel 8	34
Hotel 9	171
Hotel 10	15

#### Frage 4



Do you own more than one hotel? If yes, how many? / **Besitzen Sie mehr als ein Hotel? Wenn ja, wie viele?**

Hotel 1	No
Hotel 2	Ja, 2 Hotels und 2x Gastronomie
Hotel 3	No
Hotel 4	Ja, 2
Hotel 5	Ja 2 (Eine Frühstückspension)
Hotel 6	Yes 1
Hotel 7	1 Hotel + 1 Ferienwohnungen mit 11 Zimmern
Hotel 8	No
Hotel 9	Ja, Country Club Kitzbühel
Hotel 10	No

Frage 5

How many employees do you have in your hotel? / **Wie viele Mitarbeiter beschäftigen Sie in Ihrem Hotel?**

Hotel 1	Winter 30 / Sommer 25
Hotel 2	320 in der Pirktl Holiday GmbH
Hotel 3	Winter 200 / Sommer 100
Hotel 4	35 Winter / 15 Sommer
Hotel 5	4.7 Vollzeit
Hotel 6	Winter 60 / Sommer 15
Hotel 7	15
Hotel 8	11
Hotel 9	300
Hotel 10	6

Frage 6

How does Covid 19 affect your business and what are the biggest challenges? / **Wie betrifft Covid 19 Ihren Betrieb und was sind die größten Herausforderungen?**

Hotel 1	<ul style="list-style-type: none"> <li>- Seit November 2020 komplette Schließung des Hotels</li> <li>Größte Herausforderungen: <ul style="list-style-type: none"> <li>- Finanziell! → Stundungen und Verlängerungen der Laufzeiten der Kredite, zzgl. der neuen Kredite, um das Rating aufrecht zu erhalten</li> <li>- Planungsunsicherheit (Öffnungszeiten, Mitarbeiter Beschäftigungen)</li> </ul> </li> </ul>
Hotel 2	<ul style="list-style-type: none"> <li>- insofern hart betroffen da man den Beruf nicht ausüben kann, operativer Bereich wird verlernt</li> <li>- 8 Monate komplett geschlossen und nicht gearbeitet</li> <li>- arbeiten <b>AM</b> Unternehmen und nicht <b>IM</b> Unternehmen</li> </ul>

	<ul style="list-style-type: none"> <li>- man macht nichts (gibt nicht) und will nichts aber muss es nehmen (Hilfe) -&gt; Ungleichgewicht</li> <li>- Gefühl, dass man an der Wertschöpfungskette ganz hintenangestellt ist</li> <li>- Sinnhaftigkeit fehlt</li> </ul>
Hotel 3	Covid-19 kam im richtigen Moment, haben einen Investor Partner gesucht und bekommen, um das Hotel komplett neu aufzubauen, hätten schließen müssen für die Umbauarbeiten und können die Zeit daher exzellent nützen
Hotel 4	<p>Wie -&gt; Schließung Herausforderung -&gt;</p> <ol style="list-style-type: none"> <li>1. <u>mangelnde Planbarkeit</u>, laufende Kosten, keine klaren Anweisungen (dadurch sind Kosten entstanden, anstatt von Anfang an zu sagen es bleibt alles zu), Sommer Saison -&gt; keine Äußerungen von Regierung, keine Planungen möglich, man kann nicht kurzfristig aufsperrern als mittel großes Hotel, wenn abhängig von internationalen Urlaubern sehr schwer</li> <li>2. <u>Mitarbeiter planen</u> und man muss sie an der Stange halten</li> </ol>
Hotel 5	Betrifft das Hotel zu 100%, komplettes Betretungsverbot, können ihre normale Geschäftstätigkeit gar nicht ausüben
Hotel 6	Betrifft an allen Fronten, seit Liquidität, Mitarbeiter zu halte, Kontakt zu halten
Hotel 7	Komplett Schließung, Herausforderungen: Kontakt mit Gästen halten, 11 Mitarbeiter Kurzarbeit
Hotel 8	Wie? 8 komplett Monate geschlossen Herausforderungen: Betrieb danach wieder öffnen zu können, Zahlungen nachkommen, Personal bei Laune halten, dass die nicht die Branche wechseln, Bürokratie (anfordern, ausfüllen), dass man danach überhaupt nochmal aufsperrern mag, Take-away daneben mit Einschränkungen
Hotel 9	Wie: Komplette Schließung, Herausforderungen: Müssen trotz Schließung noch Angebote für Mitglieder speziell im Country Club anbieten, Umsatzeinbruch, Umsatzeinbrüche durch Förderungen

	einholen (schwer wegen der Bürokratie)
Hotel 10	<ul style="list-style-type: none"> <li>- Größte Herausforderung ist die komplette Schließung, da das Leben davon abhängig ist (finanzielles Problem trotz Hilfen)</li> <li>- Da sie auf Stammgäste zählen wird ein Neustart ein nicht so großes Problem sein</li> <li>- Mitarbeiter wollen arbeiten</li> <li>- sehr viele kostspielige Reparaturen fallen an</li> </ul>

Frage 7

Which Covid 19 measures do you think are useful or not useful, and which measures can be improved or are there better measures they would like to see? / *Welche Covid-19-Maßnahmen sind aus Ihrer Sicht sinnvoll bzw. nicht sinnvoll und welche Maßnahmen können verbessert werden bzw. gibt es bessere Maßnahmen, die sie sich wünschen würden?*

Hotel 1	<p>Sinnvoll: Abstand einhalten, Masken und regelmäßiges Testen</p> <p>Nicht sinnvoll: zu wenig Erfahrung, Regeln sind Regeln (K1 Person Regel erschwert das tägliche Leben und Arbeit -&gt; Möglichkeit zum Freitesten wäre sinnvoll)</p>
Hotel 2	<p>Prinzipiell sind die Maßnahmen sowohl <b>finanziell</b> (Kurzarbeit (!), Umsatzerersatz, geschenktes Geld und wird dankend angenommen (jedoch teilweise polarisierend)) als auch <b>Hygiene</b> (FFP2, Testungen, Abstand) sinnvoll</p> <p>Nicht so notwendig: Immer alles dreifach zu desinfizieren (Möbel werden kaputt z.B.)</p> <p>Wunsch: ortsgebundener sehen, Bereiche wo man Testen kann öffnen, Antikörper bzw. geimpfte Personen anders behandeln</p>
Hotel 3	<p>Staat härter durchfahren statt Jo-Jo Effekt, Maßnahmen im Prinzip alle gut, aber man hätte Sie anders kommunizieren und strikter durchhalten müssen, man kann es nicht jedem recht machen</p>
Hotel 4	<p>Sinnvoll: Kurzarbeit (einzige Chance die Mitarbeiter im Unternehmen behalten),</p> <p>Nicht sinnvoll: Umsatzerersatz und Ausfallbonus war nicht durchdacht,</p>

	kleine Betriebe haben mehr bekommen als je erträumt und bei großen Betrieben ist der Verlust desto größer, Sainsonhotel erwirtschaftet innerhalb eines kleinen Zeitraums (4 Monate) ganz andere Gewinne
Hotel 5	Nicht sinnvoll: Lockdown in Teilbereichen, Gesamte EU sollte in einen Lockdown gehen, großräumig eindämmen wie in NZ Sinnvoll: Hygienemaßnahmen
Hotel 6	Wünschen: einheitliche vorgangsweise für ganz Österreich, am besten EU weit, Eine Perspektive ist wichtig und wünschenswert Sinnvoll: Desinfektion, Lüftung, Testen (!), impfen Nicht sinnvoll: Ausfallbonus (viel gesprochen, wenig gehandelt), Geld kommt nicht an, Finanz weiß nicht, wie sie das handhaben soll, waren eher Schnellschüsse
Hotel 7	Sinnvoll: fällt mir nichts ein Nicht sinnvoll: Desinfizieren immer und überall (Geld wird aus dem Fenster geworfen), Abstand (Tische) Wünschen: Perspektive fehlt
Hotel 8	Kein Verständnis für Schließung in der Gastronomie Sinnvoll: Entschädigung, dass man über die Runde kommt (aber wollen das nicht, wollen arbeiten für das Geld) WUNSCH: Mehr reinhören, werden nicht gehört, stärkere Interessens Vertretung
Hotel 9	Sinnvoll: schnell wie möglich impfen, Masken, Abstandsmaßnahmen und Hygiene Maßnahmen Wünschen: geordnete Struktur mit perspektiven; klares Regime definieren, falls es Infektionen im Hotel gibt, Virus Infektion in das normale Leben aufnehmen, mit dem Virus leben können
Hotel 10	Sinnvoll: sind auf jeden Fall die Hygienemaßnahmen und die staatlichen finanziellen Hilfen, ohne diese würde es uns nicht mehr geben Wünschen: eine Perspektive, die man zu den Gästen kommunizieren kann,

Frage 8

In addition to the Covid crisis there is also the climate crisis. Does your hotel adapt already on the effects of climate change? / *Neben der Covid-Krise gibt es auch die Klimakrise. Wie reagiert Ihr Hotel auf die Klimakrise?*

Hotel 1	Seit Jahren viele Maßnahmen
Hotel 2	<ul style="list-style-type: none"> <li>- Langer Prozess mit vielen Möglichkeiten</li> <li>- Dank der Lage in Mieming hat die Anreise der Gäste großes Potenzial nachhaltig zu sein und mit einem möglichst kleinen Fußabdruck (Zug (1-2-3 Ticket ÖBB), Auto statt mit dem Flugzeug auf die Malediven)</li> <li>- Unterstützen Nachhaltigkeit</li> <li>- arbeiten mit SDGs</li> <li>- Wollen mit ‚First mover‘ von Klimamaßnahmen zu investieren und zusammenarbeiten</li> </ul>
Hotel 3	CO2 Euro (das Hotel spendet auf freiwilliger Basis 1 Euro für jede Übernachtung eines Gastes – das Geld kommt Projekten zugute dessen Ziel es ist CO2 Emissionen zu reduzieren, generell alles probieren und Maßnahmen zu haben die den CO2 Gehalt senken
Hotel 4	<p>Nicht wirklich</p> <ol style="list-style-type: none"> <li>1. Sommertourismus profitiert, kein heat stress</li> <li>2. Haben noch kein Problem im Winter / müssen noch nicht reagieren</li> </ol>
Hotel 5	Wollen auf Nah-Wärme umsteigen, um vom Öl wegzukommen, wollen Neudämmen mit dem Neubau, auch Solar interessant aber noch nicht in Planung
Hotel 6	Beschäftigen sich seit einigen Jahren, denken nach wie mit der Ressource umzugehen
Hotel 7	Nicht wirklich, heizt mich Öl und wird immer mit Öl heizen, müssen sparen, verdienen in einem halben Jahr so viel, um das ganze Jahr leben zu können Strom versuchen zu sparen (Sparlampen)
Hotel 8	<p>Solaranlage, versuchen Gäste aus dem Umfeld zu bekommen, statt Fernverkehr</p> <p>Werbung regional setzen</p>
Hotel 9	Emissionen gesenkt so gut es geht, Erdgas einzige fossile Energie, beziehen Ökostrom, Regional einkaufen

Hotel 10	Als kleines Hotel versuchen wir immer wieder zum Beispiel auf Müllproduktion zu verzichten (Frühstücks Buffet: ohne Verpackungen) aber große Umbauten oder ähnliches können wir uns nicht leisten
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Frage 9

If any, which measures do you have in place to take action against the climate change crisis? / *Wenn ja, welche Maßnahmen haben Sie bereits umgesetzt, um etwas gegen die Klimakrise zu unternehmen?*

Hotel 1	<ul style="list-style-type: none"> <li>- Energieeinsparungen: Wärmeisolierungen, Fenstertausch, Solar Anlage, Heizungssteuerung Optimierung, Energiesparlampen</li> <li>- Recycling</li> <li>- Regionaler/ Saisonaler Einkauf</li> <li>- Vermeiden von Plastik</li> <li>- Nicht viel auf Papier drucken, Rechnung per E-Mail</li> <li>- Lebensmittel wieder Verwertung</li> <li>- Wechsel der Bettwäsche 1x pro Woche pro 1 Woche Aufenthalt</li> <li>- E-Ladestation für Elektrofahrzeuge</li> </ul>
Hotel 2	<ul style="list-style-type: none"> <li>- Solar &amp; Photovoltaik</li> <li>- Messinstrumente, um den Stromverbrauch und Wasserverbrauch zu kontrollieren</li> <li>- Dosierungen der Waschmaschinen (60 Grad)</li> <li>- Bio Waschmittel -&gt; schauen auf das Grundwasser</li> <li>- Klimabündnis Tirol Zusammenarbeit</li> <li>- erstes Passives Mitarbeiterhaus (braucht keine Heizung, regeneriert sich selber) Erste Passivhaus in Europa im Mitarbeiter Bereich</li> <li>- Baumaterialien bewusst gewählt</li> <li>- Machen einen CO2-Fußabdruck für jeden Gast, um wissen zu verbreiten-&gt; Thema bewusst behandeln</li> <li>- Food-Waste Management</li> </ul>
Hotel 3	Bewusstsein bei den Gästen fördern, Energieeinsparungen durch den Neubau (neue Fenster, usw.), Beziehen erneuerbare Energie (durch Heizwerk zum Beispiel)
Hotel 4	Sind von Ölheizung auf Fernwärme umgestiegen, Kostenfaktor spielt eine große Rolle, Wenn Maßnahmen gute

	Förderungen haben dann ja sonst nicht, muss sich rechnen
Hotel 5	Ganz kleine Sachen, kaufen sehr regional nur aus dem nahen Raum, bieten nur offene Produkte (plastikfrei) an beim Frühstück
Hotel 6	- 1. Betrieb der auf Biomasse Kraftwerk umgestiegen ist - Photovoltaik - 2 Elektroautos - Regionalität beim Einkaufen - tasten sich immer noch heran
Hotel 7	- Stromsparlampen - Umbau neu isoliert Sonst nichts, da kleines Haus und müssen auf jeden Euro achten
Hotel 8	Solar, Recycling, Umbau neue Fenster, keine Ölheizung,
Hotel 9	- Elektroautos, Solaranlage, Nachhaltig einkaufen, setzen sich für Schwarzenegger Stiftung Climate Initiative,
Hotel 10	Haben eine kleine Solaranlage auf das Dach gebaut, haben eine. Strenge Recycling Regel für uns persönlich erstellt, achten darauf, dass wir unser Essen von den Bauern im Ort beziehen so gut es geht

Frage 10

a) To what extent are your climate change measures subsidized by the government and public authorities, and how important is this to you? / *Inwiefern werden Ihre Maßnahmen gegen den Klimawandel durch die Regierung und Behörden subventioniert und wie wichtig ist Ihnen dies?*

b) If the hotel has no measures against the climate change crisis in place: What is the reason that your hotel has no measures targeting climate change? / *Falls das Hotel keine Maßnahmen gegen die Klimakrise hat: Was ist der Grund dafür, dass es in Ihrem Hotel keine Maßnahmen gegen den Klimawandel gibt?*

Hotel 1	a) relativ wenig Unterstützung Solaranlage Förderung Digitalisierungsoffensive Förderung E-Ladestation E-Mobilität Förderung  -> Förderungen geben Anreiz + ermöglichen die Investition
Hotel 2	Ja ist ein Ansporn & ist Wichtig, macht es einfacher aber ist nicht der Entscheidungsgrund
Hotel 3	Ja bekommen Subventionen zum Beispiel bei Solar Energie und e-Mobilität, freuen sich darüber aber würden es auch ohne tun, ist nicht

	wichtig, sind überzeugt, dass sie was machen müssen, ist nicht ausschlaggebend
Hotel 4	Ja ist ein Ansporn Investitionen zu tätigen, wenn sich die Investition innerhalb von 5-10 Jahren rechnet dann ja sonst nicht; Denken nicht wirklich an das Klima, soll sich finanziell auszahlen
Hotel 5	Haben Antrag gestellt (Solar), sehr wichtig für das Unternehmen, je mehr Förderung desto mehr wollen und können sie umsetzen
Hotel 6	Ja, ist hilfreich aber nicht der ausschlaggebende Grund, Impulse teilweise schwierig zu erreichen und schlecht kommuniziert
Hotel 7	Gibt es nur für die großen, haben nichts bekommen, viel zu kompliziert
Hotel 8	Ja bekommen einiges (haben schon etwas für die Solaranlage und unser Elektroauto bekommen), jeder Cent hilf, gebaut wird nicht aufgrund der Förderung, just nice to have, umbauen muss man eh
Hotel 9	Gibt welche und diese werden lukriert (z.b. Solar oder für E Autos), ist aber nicht so wichtig, nettes add on
Hotel 10	Haben für die Solaranlage ein bisschen was bekommen (war auch ein Ansporn), jedoch ist es trotz Förderungen immer noch sehr teuer und gerade für so kleine Betriebe wie uns sehr schwer größere Sachen umzusetzen

Frage 11

A) Has the issue of climate change become more important to you because of the Covid-19 crisis, or has it rather faded into the background? / *Hat das Thema Klimawandel aufgrund der Covid-19 Krise für Sie an Bedeutung gewonnen oder ist dieses eher in den Hintergrund geraten?*

B) Why did the issue become more important? OR Why did it fade into the background? *Warum hat das Thema an Bedeutung gewonnen? ODER Warum ist es in den Hintergrund gerutscht?*

Hotel 1	Da fehlende Möglichkeiten für Investitionen und Finanzierungen -> größere Projekte für den Klimaschutz in den Hintergrund gerückt
Hotel 2	Arbeiten seit 2018 mit den SDGs, ist aber gleichgeblieben, man hat einfach mehr Zeit darüber nachzudenken



Hotel 3	Gleicher Stellenwert wie davor, konnten nicht so viel Geld sammeln mit der Everyone for Climate Stiftung da keine Hotels offen hatten, bisschen ruhiger geworden da das Thema COVID viel Energie auf sich gezogen hat; Thema ist noch da aber ist ruhiger geworden
Hotel 4	Sicher nicht an Bedeutung gewonnen, gleichgeblieben, Investieren, wenn diese einen finanzielles Nutzen bringt sonst nicht
Hotel 5	Eher in den Hintergrund gerutscht, arbeiten lange daran Plastik überall wo möglich zu entfernen und jetzt müssen sie wieder alles in kleinen Portionen abpacken und portionieren wie vom Covid Gesetz vorgeschrieben, alles was versucht wurde in kleinen Schritten in Richtung Ökologiesierung zu helfen hat Covid mit einem Schlag 10 Stufen zurück geschlagen
Hotel 6	Total in den Hintergrund, Planungsunsicherheit, 100% gefordert mit Covid-19 Krise
Hotel 7	Hintergrund gerutscht, Staat muss anfangen in Nachhaltigkeit zu investieren
Hotel 8	Eher ruhiger geworden um das Thema Klimawandel, weil sich alles um die Pandemie dreht z.b. Friday for Future gibt es das noch?
Hotel 9	Sicher in den Hintergrund geraten da Covid-19 viel präsenter war -> jeder redet nur noch über den Infektionsschutz, bekommt jedoch mehr Wertigkeit in den Köpfen der Menschen da alles was nachhaltig und gesund ist an Bedeutung gewonnen hat -> In weiterer Folge wird das Thema Klimawandel an Bedeutung gewinnen da das Thema Lebensraum an Bedeutung gewinnt
Hotel 10	Komplett in den Hintergrund geraten da sich alles um die Pandemie dreht, alle Ideen, welche wir hatten, um klimafreundlicher zu werden haben wir über den Berg geworfen da wir uns um unsere Existenz nun kümmern müssen

Frage 12

Did the Covid-19 crisis affect the implementation of climate change strategies in your business? / *Hat die Covid-19-Krise die Umsetzung von Klimaschutzstrategien in Ihrem Unternehmen beeinflusst?*

Hotel 1	Ja durch die <u>Schutzmaßnahmen</u> : - höheren Reinigungsaufwand - mehr Müll (Masken, Einweghandschuhe) Abstandseinhaltungen - Energieaufwand erhöht (Private Sauna) - Noch ein Fahrzeug, um die Gäste zur Piste zu bringen (5 Personen pro Bus)
Hotel 2	Ja positiv und negativ - Food-Waste Management besser (Buffet auf Service umgestellt, hätten Sie sich davor nicht getraut da Gäste immer mehr wollen) -> Bereinigung des Essens Produktes - Desinfektion (mehr Waste, neue Möbel da kaputt durch vieles Desinfizieren)
Hotel 3	Nein, kommt alles wie es kommt unabhängig von COVID
Hotel 4	Gleichgeblieben, das eine hat mit dem anderen nichts zu tun
Hotel 5	Bis auf Umbau, sehr beeinflusst, alle Strategien vorerst auf null gesetzt wegen der Planungsunsicherheit
Hotel 6	Nicht beeinflusst, ist fixer Bestandteil wollen auf jeden Fall was tun
Hotel 7	Wollen und können keine Maßnahmen umsetzen, kein Geld, keine Perspektive
Hotel 8	Nein, weil keine geplant waren
Hotel 9	Ja schon müssen vorsichtig mit den Ressourcen sein, die sie haben; Geben grundsätzlich weniger aus im Moment, weil sie auch keine Einnahmen haben;
Hotel 10	Ja sehr, wie gesagt wir hatten ein paar Ideen, aber das ist nun alles leider wieder verworfen worden. Wir können uns es einfach nicht leisten. Um uns auf den Klimaschutz zu konzentrieren. Viel wichtiger ist die Frage wie es nun mit uns weitergeht und wann wir wieder aufsperrn dürfen

Frage 13

If any, which climate change measures will your business implement in the next 2-3 years? *Wenn ja, welche Klimaschutzmaßnahmen plant Ihr Unternehmen und werden innerhalb der nächsten 2-3 Jahre umgesetzt?*

Hotel 1	- Wegen der großen Unsicherheit sind nur kleine Renovierungen wie z.B. Fenstertausch möglich, Elektroauto Anschaffen - Nicht absehbar was Umsetzbar sein wird
Hotel 2	- Jeder Gast wird einen CO2-Fußabdruck bekommen um das Thema jeden vor Augen zuführen
Hotel 3	Es wird viel Wert auf Co2 Reduktion gesetzt, Müll reduzieren, regional Einkaufen, Bewusstsein schärfen sowohl im Hotel als auch bei den Gästen, Durch Umbau wird der Neubau komplett Energie effizient (Erneuerbare Energie), Baumaterialien werden so gewählt, dass sie teilweise wiederverwendbar sind und auch umweltschonend recycelt werden können
Hotel 4	Nein, falls es vernünftige Angebote gibt kann man darüber nachdenken
Hotel 5	hauptsächlich erneuerbare Energie, um von der Öl Heizung wegzukommen
Hotel 6	CO2 Neutralität für das Hotel herstellen, Ausbau der Photovoltaik, Dachsanierung, Renovierungsmaßnahmen (Fenster, bessere Isolierung, ...), Regionalität
Hotel 7	Nein, müssen erstmal schauen dass sie diese Krise überleben
Hotel 8	Umbau mit Klimafreundlichen Maßnahmen, Fenster, Türen mit Energiewert,
Hotel 9	Ja, Fuhrpark auf Elektro umstellen, mehr Solarpannele, Wärmepumpen optimieren, regionale Nahrungsmittel einzusetzen, Fußabdruck zu minimieren
Hotel 10	Nichts Konkretes, wenn sich etwas anbieten können wir schauen aber haben nichts in Planung

Frage 14

In your opinion, what are the most important measures in your hotel to become resiliently for the future? / *Was sind aus Ihrer Sicht die wichtigsten Maßnahmen, um sich widerstandsfähig (krisensicher) für die Zukunft aufzustellen?*

Hotel 1	- längere Öffnungszeiten, früher im Frühling bis später in den Herbst
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	<ul style="list-style-type: none"> <li>- thay (Unabhängigkeit von Bergbahnen z.B.)</li> <li>- Umweltmaßnahmen kommunizieren (für den Gast wichtig und wird nach der Covid Krise in den Vordergrund rücken)</li> <li>- Qualitätssteigerung</li> <li>- Flexible Angebote (nur Frühstück, Halbpension, ...)</li> </ul>
Hotel 2	<ul style="list-style-type: none"> <li>- gegenseitige Hilfe und gegenseitiges lernen</li> <li>- Aufeinander schauen und Hören</li> <li>- Sozial stark sein</li> <li>- Unterstützung von Vorreitern und Vordenker (Nachhaltigkeit)s</li> </ul>
Hotel 3	<p>Global und regional Handeln (wenn nur Sie handeln ist das ein Tropfen auf den heißen Stein), CO2 Euro weiterverbreiten, überall mitwirken um die Erde ins Gleichgewicht bringen</p> <ul style="list-style-type: none"> <li>- Ganzjahrestourismus 300 Saisonstage</li> <li>- mehr Möglichkeiten im Hotel</li> </ul> <p>Wird immer weitergehen, sind in einer glücklichen Lage auf 1800m zu liegen (Leute kommen in die Berge, wenn es die Malediven wegschwemmt), Sommerfrische in die Berge, wirkt sich noch nicht negativ auf die Lage aus</p>
Hotel 4	<ul style="list-style-type: none"> <li>- glaubt nicht, dass sich viel ändern wird, dass das kleine Österreich einen großen Einfluss auf das Klima haben wird</li> <li>- es ist wichtig, dass man jedoch Angebote entwickelt, die den Urlaub <u>unabhängig</u> machen vom Wetter</li> <li>- Schneeunabhängig machen mit Hilfe von Wellness Angebot zum Beispiel</li> </ul>
Hotel 5	<ul style="list-style-type: none"> <li>- Optimismus</li> <li>- Respekt vor der Natur</li> <li>- Bei den Gästen bewusst Klimamaßnahmen kommunizieren</li> <li>- längere Öffnungszeiten</li> <li>- während Covid auf Geschäftsreisen umgestiegen, um wenigstens ein bisschen Umsatz zu haben</li> <li>- Kreativität ist gefragt</li> </ul>
Hotel 6	<ul style="list-style-type: none"> <li>- nach dieser Krise, die Krise aufarbeiten und schauen wo sind unsere größten Schwächen</li> <li>- Erlebnis Berg an den Mann zu bringen mit mehr Aktivitäten bieten (nicht nur Schi)</li> </ul>

	<ul style="list-style-type: none"> <li>- längere Öffnungszeiten</li> <li>- mit Natur identifizieren</li> <li>- Schulterschluss zwischen Regierung und Betriebe sowie Mitarbeiter und Betrieb</li> <li>- Infrastruktur Ausbauen</li> <li>- nicht nur thematisieren aber auch Lösungen anbieten</li> <li>- Nature den Menschen greifbar machen</li> </ul>
Hotel 7	<ul style="list-style-type: none"> <li>- Gäste belehren warum manche Sachen notwendig sind</li> <li>- mehr Pflanzen anbauen</li> <li>- Regional einkaufen aber geht noch nicht -&gt; bei uns viel zu teuer! Fleisch aus Argentinien viel billiger als aus Österreich</li> <li>- werden nicht länger Aufsperrern, haben immer noch den Gletscher, Schnee wird immer kommen und bleiben aber wird sich verlegen</li> </ul>
Hotel 8	<ul style="list-style-type: none"> <li>- Unabhängigkeit!! So wenig wie möglich Personal,</li> <li>- Spezialisieren aber auf jeden Fall Unabhängigkeit</li> <li>Österreich sehr gut erreichbar (angesprochene Gäste sollten in 5-6 Autostunden erreichbar sein)</li> </ul>
Hotel 9	<p>Klimawandel ist eine Bedrohung für unseren Lebensraum:</p> <ul style="list-style-type: none"> <li>- achtsam zu sein und auf unseren Lebensraum zu achten, Maßnahmen respektieren, die unseren Lebensraum unterstützen</li> <li>- wichtig, dass Leute bewusst sind und bewusstwerden (beginnt im Kopf)</li> <li>- Bewusstsein durch Veranstaltungen den Menschen näherbringt und schärft</li> </ul>
Hotel 10	<ul style="list-style-type: none"> <li>- regional einkaufen</li> <li>- Zusammenhalt</li> <li>- Akzeptanz von jeglichen Krisen und das Beste daraus machen</li> <li>- Angebot von nur Urlaubsgästen auch auf Business reisen ausweiten</li> <li>- mehr Digitalisierung, da wir in diesem Bereich etwas hinterher sind</li> </ul>