



Analysis and Recommendation Report

COMMUNICATING THE SIGNIFICANCE OF A UNESCO BIOSPHERE REGION

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Introduction

This project aims to better understand how tour operators perceive the significance of the Átl'ka7tsem Howe Sound Biosphere Region, specifically the recent UNESCO designation. While there exists great potential in the area for outdoor recreation and eco-tourism, the environment is also being threatened by overtourism, overuse of resources, overdevelopment, and the increasing popularity of backcountry wilderness. The biosphere designation creates an opportunity to better educate tour operators on the importance of the region's environment, so that they can in turn educate tourists to better care for their surroundings.

Background

The Howe Sound Biosphere Region Initiative Society (HSBRIS) exists to strengthen collaboration in Átl'ka7tsem/Howe Sound and promote knowledge of the biosphere region and what that means for people who live, work, and recreate in the area.

After cleaning up from a century of heavy industry pollution, the region is now an ecological wonder that is respected around the world for its pristine wilderness and ecological biodiversity. The region now faces new challenges that come with being a popular tourist destination and infrastructure not keeping up with changing economic fortunes. While the pollution from last century's heavy industry is largely gone, new challenges exist that need to be addressed to ensure the continued sustainability of the region's natural wonders.

Recently granted with the UNESCO Biosphere Region designation, there is a desire to make sure that this title is understood and that everyone in the region has a chance to be educated on the significance of the biosphere region. While many take advantage of the plentiful outdoor recreation opportunities available in the area, it is unclear whether the same tourists are aware of the ecological diversity that surrounds them.

This project was undertaken to better understand the needs of HSBRIS and how those could be advanced through collaboration with Capilano University students. Learning the skills of project management, the students set out to assist HSBRIS with delivering on short-term needs that both benefited the students through an educational opportunity, and allowed HSBRIS to achieve organizational goals through the help of a team.

Project Overview

Purpose

It has been noted that there is often confusion among residents, tour operators and tourists in the Átl'ka7tsem/Howe Sound region about what a biosphere region is and what the UNESCO designation means. With that, the purpose of this project is to produce recommendations and deliver clear information with cohesive messaging to give to tour operators of the Átl'ka7tsem/Howe Sound region. It is essential that tour operators, especially, have an understanding of facts, figures and history that are necessary for

information accuracy and cohesive messaging in the region (i.e. important species, Indigenous history, Indigenous place names, artifacts etc.). The UNESCO designation presents a powerful opportunity to leverage the brand in the Átl'ka7tsem/Howe Sound region's favor by promoting sustainable tourism practices.

Having knowledgeable tourism operators in the region who understand the significance of this designation will result in communicating appropriate and accurate messaging to visitors.

Objectives

- Research what tour operators in the area know about being in a biosphere region, identify where confusion lies and create deliverables to clarify this.
- Create communication regarding the UNESCO designation so that tourism operators are sharing cohesive messaging with the community and visitors. The goal is to foster an understanding of the significance of the UNESCO biosphere region so that people will have greater care and respect for nature.
- Provide important facts, figures and history that is necessary in order to understand the entire story.
- Clarify the difference between a UNESCO Biosphere and a UNESCO Geopark, due to the up and coming Fire and Ice Sea-to-Sky geopark that is gaining traction.
- Using the framework of the United Nations Sustainable Development Goals, examine the sustainability of area tour operators and whether they are promoting sustainable tourism practices.

Findings and Research

S.W.O.T. Analysis

The SWOT analysis provides a preliminary overview of the region's strengths, weaknesses, opportunities and threats. This allows for a snapshot of where resources could be focused to extract maximum gain, and areas which could provide difficulty going forward.

Strengths

- Proximity to large areas of population (Vancouver, Whistler)
- Accessibility (Sea to Sky Highway)
- Popular tourism attractions in the region (Sea to Sky Gondola, Britannia Mine Museum, etc)
- Extensive trail network and access to BC provincial parks

Weaknesses

- Locals and tourists are unaware what UNESCO designation means for the region.

Opportunities

- Brand new UNESCO designation
- Infrastructure development
- Increased demand for backcountry/adventure tourism due to COVID-19

Threats

- New developments in the area
- New man-made beach access
- Overtourism

Market Research

Tourism is an important industry in many biosphere reserves and Átl'ka7tsem/Howe Sound is no different (Canada, 2021). For this reason it is important to analyze the market that is visiting, in order to understand who they are and what their habits are. When it comes to domestic travellers within Canada, it has been noted that 12% are 'Authentic Experiencers'. According to Destination Canada (CTC, 2015) "Authentic Experiencers are typically understated travellers looking for authentic, tangible engagement with destinations they seek, with a particular interest in understanding the history of the places they visit." In regards to the demographics of domestic travellers, their age is 55+ with an average household income and with a higher-than-average education. Corresponding to what the HSBRI is all about, these travellers tend to be concerned about the health of the planet and what that means for future generations. They also show a tendency to incorporate foreign cultures into their life, such as going to an Inuit art gallery or visiting and dining in local shops (CTC, 2015). Moreover, the HSBRI has several family-friendly and all age tourist attractions in the area, such as the Britannia Mine Museum, Sea to Sky Gondola, Shannon Fall Provincial Park etc. These attractions attract mainly families, students, summer camps for kids and young explorers.

Comparative Analysis (UNESCO Biospheres)

In order for HSBRI to make the most of its opportunities and advantages, it would be beneficial to analyze what other UNESCO biospheres have done. Comparing what has worked and what has not, and seeing if any of these strategies could be applicable for the Atl'ka7tsem Howe Sound Biosphere Region.

Provincial Biospheres

The Clayoquot Sound Biosphere Reserve



(UNESCO, 2021)

Located on the west coast of Vancouver Island, Clayoquot Sound was designated as a UNESCO Biosphere Reserve in 2000. The total size of the biosphere reserve is 349,947 hectares, about 100 hectares larger than the Atl'ka7tsem Howe Sound Biosphere Region. Similar to the Atl'ka7tsem/Howe Sound Biosphere Reserve, the Clayoquot Sound Biosphere

Reserve has an administrative authority named the Clayoquot Biosphere Trust (CBT), who are responsible for promoting and maintaining the spirit of the reserve. Both reserves are also located in the same regional network: EuroMab. EuroMAB is the largest and oldest of the MAB (Man and Biosphere) Regional Network programs: 302 biosphere reserves in 36 countries. The primary habitat of the reserve is made up of a temperate rainforest, covering 85% of the terrestrial component and extending to altitudes of 900m.

The Clayoquot Sound Biosphere Reserve does not include most of the traditional lands of the Ucluelet (Yuu-tluthiaht) and Toquaht First Nations, and their communities (Ittatsoo and Macoah) in the Barkley Sound region or the District of Ucluelet. Since these Nations and district municipalities are represented on the CBT Board of Directors, interest has been expressed by the CBT in expanding the transition area to include these adjacent areas within the biosphere reserve region. The reserve is home to 5 communities of Indigenous people, Nuu-chah-nulth, which means people who live along the mountains and the sea. In the past there were numerous industrial logging corporations which operated in the area, however they have since been replaced by Ma-Mook, which is a company owned by the Central Region First Nations.

With the stunning ocean and the vast ranges of forest, market driven tourism has caused a number of private developments along the 42km road from Tofino to Ucluelet as well as within Ucluelet. With all these private developments, there is much less public access to the ocean, including both Clayoquot and Barkley Sound. Therefore, tourism crowding has become somewhat of an issue during the summer months.

Located in close proximity to Tofino, Clayoquot Sound has many initiatives to help preserve the land. Established in 1979, Friends of Clayoquot Sound has been operating in an effort to promote environmental justice education, community organizing, biodiversity, and conservation. Some of these initiatives include ancient rainforest protection, protecting the local wild salmon population, climate action, and a ban on mining. Throughout the Covid-19 pandemic, the Clayoquot Sound Biosphere Region had to re-evaluate and re-align with the values of sustainable tourism. Tourism in Clayoquot Sound has an enormous economic impact on the surrounding area, and these initiatives have a considerable influence in attracting different types of people to the area. The Howe Sound Biosphere Reserve would greatly benefit from examining these initiatives as sustainable tourism is becoming an increasingly dominant trend. For example,, Clayoquot Sound has various opportunities for education such as environmental stewardship, in which people have the opportunity to learn in an outdoor classroom about the importance of maintaining the environment, which includes limiting the number of people in the area at any given time as to not disrupt the area and prevent overcrowding from tourism. The first nations communities have significant input and control regarding the businesses in the area. The Tribal Parks Allies Program is an example of regenerative tourism in the area. This program is a community of entrepreneurs who “certify participating businesses and organizations who meet their certification standards, which include helping to share their story and supporting the Tribal Parks Guardians and other regional services. Allied businesses and organizations support the Tribal Parks by collecting a 1% ecosystem service fee on behalf of Tla-o-qui-aht First Nations. The revenue is reinvested back “to the people and ecology that comprise the life of this place” (Tourism in the Clayoquot Sound Biosphere Region, 2021).

The Mount Arrowsmith Biosphere Reserve (MABR)



(UNESCO, 2021)

The Mount Arrowsmith Biosphere Reserve (MABR) is approximately 1200 kilometers on the eastern side of Vancouver Island. The reserve spans between Nanoose Bay to Qualicum Bay, with the highest



point being the peak of Mount Arrowsmith at 1817 meters, and the lowest at the Salish Sea at 300 meters. Compared to Howe Sound Biosphere Reserve and the Clayoquot Sound Biosphere Reserve, the MABR stands out due to the incredible elevation changes throughout the biosphere region. Furthermore, the MABR is bordered by 5 watersheds, Bonnell Creek, Nanoose Creek, French Creek, Little Qualicum, and Englishman River. This reserve is home to many diverse ecosystems from the high mountain tops to dense forests and marine life.

The UNESCO biosphere reserves have been models for the UN Sustainable Development Goals over the years, including the MABR. They showcase solutions or plans for a sustainable future, and the celebration of cultural diversity. The MABR is involved with various partnerships within the local community in an effort to make an impact through the SDG's. The trend of sustainability is one that is heavily focused on at the MABR and all biospheres all around the world. The MABR has numerous projects all focusing on different SDGs. For example, the Amazing Places Project which aims to connect people with nature and educate the local residents and visitors about the ecological significance of the area. With all these unique ideas, the MABR is in a position to make a significant impact on their surrounding community.

The Mount Arrowsmith Biosphere Reserve is located close to the Clayoquot Sound Biosphere Reserve, just on the other side of Vancouver Island. In the early 1900's the forests in the area were logged, meaning the trees seen today are second growth and are just reaching the size where they can once again be logged. This is causing logging companies to gain further interest in the area. The Coastal Salish First Nations live directly in the biosphere reserve, and approximately 38,000 residents live in the area as well. The main source of income for the majority of the people comes from either tourism and service industries or fishing and forestry.

Tourism has been slowly gaining popularity in the MABR and taking over the traditional income methods of logging and fishing. The Oceanside Tourism Association reported room revenue increases of 1.48% back in 2010, and they have been continuously growing. The association's budget has also been increasing slowly each year to accommodate for the increase in tourism. Some observed trends include last minute travel plans, shorter trips, and discount hunting. There are many variables that affect decision making to visit the MABR, the biggest being the weather. "As the region relies primarily on regional getaway markets, potential visitors may look at the weather forecast on Tuesday or Wednesday and make a decision on a weekend getaway from then based on where they can stretch their budget the most. As a result, bad weather has more impact than ever" (Clermont, 2011)

One of the most significant tourism initiatives being promoted in the Mount Arrowsmith Biosphere Reserve is the Amazing Places Project. This project connects people with nature in the UNESCO biosphere

reserves in Canada as well as educates residents and visitors alike. Through this project, people learn the ecological significance of outdoor spaces, and in turn gain a greater appreciation as well as a desire to help protect the sites. The Amazing Places Project highlights various hidden gems throughout the biosphere region for tourism to come visit, while also educating them to ensure that the environment is maintained properly and overcrowding does not occur. Furthermore the MABRRI has multiple research projects being facilitated by the Vancouver Island University. These projects will help to raise awareness about the region by including the residents, in turn, increasing safe and sustainable tourism for the biosphere reserve. The Howe Sound Biosphere Reserve could pull from these initiatives and projects and adapt them for use in the Howe Sound area in an effort to promote sustainable tourism, just as the Mount Arrowsmith Biosphere Reserve has done.

National Biosphere

Tsa Tse Biosphere Region



(UNESCO, 2021)

The Tsa Tse Biosphere Region is located in the northeastern corner of the Northwest Territories, receiving its UNESCO designation in 2016. This natural landscape covers a surface area of around 9.3 million hectares surrounding the Great Bear Lake watershed. The Tsa Tse region is not only the first Indigenous led biosphere region but is also the largest international biosphere region. In addition, the region is the largest remaining example on earth of a fully functioning cold, freshwater ecosystem.

The region itself has no major tourism traveling through the area, with the only residents of the area being the of traditional First Nation Dene community of Déljñę. The area is run by a self-governing authority, which has unfortunately also led to a lack in the development of infrastructure.

The Tsá Tué International Biosphere Reserve prioritizes the symbiotic relationship between protecting the environment and supporting the traditional ways of life of its Indigenous cultures. There are several ways that they have engaged their community and visitors. For example, involving youth is one of the focuses of the biosphere reserve where every summer, youth go out on the land with elders to learn cultural practices such as preparing hides, setting nets for trout and gathering traditional medicines (Gignac, 2020). Another way this reserve has thought of gathering focus and engagement is by being part of a Canadian TV series. *Striking Balance*, Season 2 explores nine of Canada’s breathtaking UNESCO biosphere reserves. Narrated by Blue



(Striking Balance, 2020)

Rodeo’s Jim

Cuddy, each 50-minute episode visits a different biosphere to investigate how residents are overcoming the challenges that are threatening the sustainability of these amazing places (Gignac, 2020).

Strategies for this region certainly will lay within the authentic experiential tourism sector with the remote state of the area, which is surrounded by a large body of water with rich history shared through the generational stories of the community. To add, the trend of cultural explorers will benefit from the seasonal events that one can enjoy during time away from city living.

Within the region, there are opportunities of:

- targeting the cultural explorer travelers,
- making the most of being off the grid,
- Capitalizing on the rich history of the area
- Introducing outdoor recreation university students to work and learn in this area, and,
- Motivating the community to get involved by the creation of youth based activities such as summer camps or even outdoor education weekends with schools in and around the Northwest Territories

The area itself has gaps within it's infrastructure, business development and as previously mentioned, the accessibility to the region.

In all, the Tsa Tse Biosphere region is a beautiful self governing region, led by the Indigenous community that calls the area home. The area would benefit greatly from more funding from the territory to help the development of infrastructure in the region to allow the cultural explorers to access the biosphere. In turn, the region and its residents would be able to thrive with added community involvement within the Northwest Territories to share the rich culture and nature of this biosphere region, which will in turn help promote a sustainable tourism flow.

In comparison to the HSBR, this region's technology, marketing and related functions are heavily outdated and not as appealing. However, there are a few similarities shared between the two areas as such:

- Large bodies of water
- A vast amount of forest cover to explore
- Community involvement

Conversely, there are highlighted differences such as accessibility from the most populated city in the regions Province/Territory as the HSBR is approximately a 1 hour journey from Downtown Vancouver, while the Tsa Tse Region is approximately 7 hours from Iqaluit.

Bras D'Or Lake Biosphere Reserve



The Bras d'or Lake biosphere reserve was designated by UNESCO in 2011 and strives to promote the growth of environmentally sustainable businesses along with encouraging all people, including industry, with nature to work better together. When it comes to public education and outreach as well as upcoming activities, the reserve has been working hard to reach that goal. They

Published two science curriculum resources for elementary school teachers that use MAB principles and Bras d'Or Biosphere examples. As well as developed a *20hr Classroom* at a ski hill to teach recreating school children about food webs and animal adaptations in the Biosphere. Publishing regular updates on biosphere activities on the UNESCO-MAB *Proud-to-Share* web site are also points they touched.

In 2021, the nonprofit organization Ocean North which supports marine conservation, along with Indigenous and coastal communities, partnered with Bras D'or Lake Biosphere Reserve and made a scholarship contest. The objectives of this project are to connect Mi'kmaw and non-Indigenous communities, promote healthy recreation and sustainable development opportunities, collect scientific data on the health of the lakes and encourage environmental stewardship (Ocean North, 2021).

Although the following activities are from the 2017 annual report, they do serve as some good ideas to use for the new Howe Sound Biosphere:

- Secure funding for highway signs for visitors and more interpretive signs for residents.
- Develop active learning opportunities for visitors and residents in the biosphere.
- Advance marketing and implementation of the *Trail Project* with academic partners to document existing trails in the biosphere, promote, and connect them.

In regards to the trail project, Bras D'Or Lake Biosphere Reserve stated "This proposed Trail is not just a pathway; it is a vehicle through which communities surrounding the Lake will join together in thoughtful promotion of their environmental and community assets as they pursue ways to achieve responsible economic development." (Association, B. d., 2018). Through interpretive messages along the trail, visitors will also be educated on the land.

Fundy Biosphere Reserve

This biosphere is in New Brunswick and was designated as a UNESCO Biosphere Reserve in 2007. To keep active and engaging, they launched an 8-part documentary series called "Surviving the Fundy Footpath" to highlight one of North America's 50 best hikes as well as completed a documentary on wildlife corridor connectivity on the Chignecto Isthmus (the land between Nova Scotia and New Brunswick).

Other activities this reserve had planned to increase public engagement were:

- Releasing an Amazing Places Challenge to encourage Canadians to visit all 50 of their Amazing Places and tag themselves on social media. The project will include 7 photo essays about activities at seven of their Amazing Places (Fundy Biosphere Region, 2017).
- They were also developing new lesson plans aligning with the NB curriculum based on their available content focused on local examples of environmental issues and conservation efforts for grade 8 through 12 in French and English.

International Biosphere

Mura-Drava-Danube Biosphere Reserve



(Golub, 2021)

It is extremely important with the rate of climate change and crisis that climate resilience, sustainable development and regional conservation efforts are put forward and the Mura-Drava-Danube Biosphere Reserve is a notable example of this, not only in Europe but world-wide (Zhongming et al., 2021). The Mura-Drava-Danube Biosphere Reserve is the only 5 – country Biosphere in the world, “currently, there are 714 biosphere reserves in 129 countries, only 21 are transboundary, which are mostly bilateral” (Amazon of Europe, 2022). This reserve is the flagship multicounty reserve (Mohl, 2021), and encompasses 1 million hectares of land and 900,000 people living in the five countries: Austria, Croatia, Hungary, Serbia, and Slovenia (Zhongming et al., 2021).

Ecosystems have no borders or boundaries, just like climate change and pollution, amongst many other things have no borders or boundaries. Because of this, “transboundary cooperation in the protection, restoration and sustainable development of shared ecosystems are needed more than ever” (Mohl, A., 2022).

Lakes and rivers can be within multiple regions or countries but water sources like inlets, rivers that run into oceans and oceans themselves could have affects internationally. Water source concerns are relevant to both the Mura-Drava-Danube Biosphere Reserve and the Howe Sound Biosphere Reserve because “overexploitation of lakes, rivers and aquifers can jeopardize these ecosystem services and have dire consequences for the reliability and sustainability of water supplies” (UN-Water. n.d.).

The Mura-Drava-Danube Biosphere Reserve was developed in 2021 by combining and linking initiatives with other biospheres in the region that were created to protect the same, if not, remarkably similar biodiversity. By doing this the Mura-Drava-Danube Biosphere Reserve has “recognize(d) and mainstream(ed) protected areas as natural solutions to global challenges” (Mohl, A., 2022). Challenges such as: climate change, pollution, land degradation, river restoration, natural flood protection, sustainable business practices, food and water security, traditional land use, culture preservation, health and wellbeing of locals and visitors, and providing sustainable nature-based tourism

Awareness and Communication

To be successful in targeting the above challenges, the main pillars that need to be implemented into any biosphere region are awareness and communication. Both pillars are dependent on funding; the Mura-Drava-Danube Biosphere Reserve has a lot more funding than traditional biosphere reserves because of being in 5 different countries. The Mura-Drava-Danube Biosphere Reserve is funded by the 5 individual countries through government and grant funding as well as “additional EU co-financed projects” (Mohl, 2022) as well as “Interreg Programmes and EU LIFE” (Futurium, 2021).

“Stakeholder participation and collaboration, governance, finance and resources, management, and awareness and communication are the most influential factors in the success or failure of the biosphere

reserves” (Van Cong et al., 2017). Adequate awareness and communication are the first step in ensuring positive stakeholder collaboration and finances, but if done in the wrong way, could be very detrimental to the biosphere reserve.

Success of a Biosphere Region

Van Cong et al., conducted research into what makes biospheres successful or unsuccessful: “Respondents highlighted that good awareness and communication about the biosphere approach leads to willingness to support the biosphere program and to implementation of designation compliant activity. In practice, however, misunderstanding of the BR concept has not only resulted in establishment of non-compliant pre-Seville sites but also misuse of the buffer zone and associated transition zone” (2017).

They go on to say that “Awareness and communication had a strong correlation with learning orientation and system thinking, and regional integration” but “the failure of a great number of sites resulted because the BR nomination was only an exercise in rebranding existing national parks” (2017). Poor communication has become a leading reason for these sites to historically be less successful than world heritage sites.

An example of a country which has immense potential for successful biosphere regions is Australia, unfortunately due to funding shortages and lack of finance for such biosphere reserves, they were unable to create awareness and proper implementation. For those parks that were implemented periodic reviews were not funded and therefore not conducted, resulting in discouragement for sites to continue the process of becoming a biosphere reserve (Van Cong et al., 2017).

Awareness through tourism such as ecotourism, adventure tourism and heritage tourism can encourage the local communities and governance to effectively manage resources of the area such as natural and cultural resources (Chai-Aryalert, 2020). Although, “the rapid growth of tourism affects the environment in terms of both natural attractions and local community identities” (Chai-Aryalert, 2020). It is apparent that while awareness needs to happen in order to be successful, it needs to be planned thoroughly and implemented slowly to avoid over tourism of the area in a brief period.

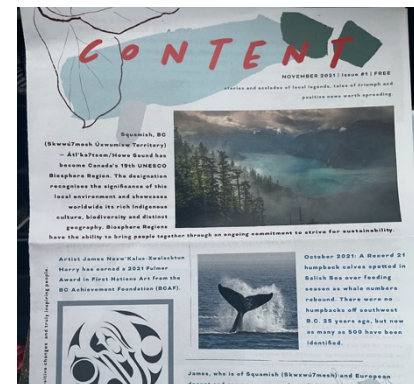
This shows the importance of communication to the community in the Atl'ka7tsem/Howe Sound Biosphere Region, and why it is so important to create a strong local connection to the land. While this likely already exists for many people in the region, having people understand the true significance of the biosphere designation may help with the longevity of the biosphere and ensure it remains protected for years to come. Increasing local awareness will hopefully also bring government attention to the strain of over tourism on area communities, and allow a joint action plan to be created to address these issues.

Local Perspectives

A variety of tourism operators in the region have been engaged to speak to what the UNESCO biosphere designation means to them, and how, if at all, it might impact their place of work. The UNESCO name is recognizable to many around the world, and it is likely to develop into another unique selling feature of Atl'ka7tsem/Howe Sound. To protect the privacy of those interviewed, names of specific businesses and individuals will not be used.

Most employees at these businesses were aware of the biosphere region’s existence, but beyond that were unsure of what it meant to live and work in the area. Many people in the region share a passion for the environment and were often excited to see this recognized through the creation of the biosphere region, but some felt as though it was just a name, as large-scale development is still moving ahead in the area. There was little in the way of linking tourism and the biosphere, although a host at a local area attraction was able to suggest multiple paths and trails that could be used to responsibly take in the area. Some people interviewed did not believe the biosphere designation had anything to do with tourism whatsoever.

The only written reference to the UNESCO biosphere region designation was found on the November 2021 issue of Content, picked up from a free magazine rack at the Squamish Adventure Centre. The paragraph mentions that “biosphere regions have the ability to bring people together through an ongoing commitment to strive for sustainability” (Content, 2021), and mentions the significance of the local environment and Indigenous history. No other references to the biosphere could be found in area magazines or newspapers. The visitor centre was unable to provide any further information on the biosphere region, other than showing what was available at howesoundbri.org.



(Description: Image of ‘Content’ newsletter found in the Squamish Adventure Centre)

While local tour operators and tourism employees seem aware of the biosphere region designation, and happy to have the importance of the local environment recognized, many do not seem aware of how this can benefit the region and promote sustainable tourism. Tourism businesses are not integrated with the biosphere region, nor do they have the resources to share with tourists on what it means to be on the land. This information does exist online, but as of yet tourism operators do not seem to have taken advantage of it or found a way to make it a part of their business and tourism product.

Indigenous Perspective

In order for this project to leverage the UNESCO designation, the perspective and values of those who live in the region must be considered. Moreover, in the case of First Nation communities such as the Squamish Nation, who’s stories and culture are engraved in the region, these values must be prioritized. As Pauline Le Bel, the author of *Whale in the Door: A Community Unites to Protect B.C.’s Howe Sound* book states “there’s no pristine environment that hasn’t had people in it” and Howe Sound’s First Nations have been there for thousands of years and therefore, their opinion, stance must be part of any project about their territory as “they have been invisible on their own land for far too long” (Thuncher, 2017). Working with the other communities of Howe Sound is important to the Squamish Nation, but members of those communities must be aware of cultural and spiritual values within the planning process, rather than being focused only on recreational, economic, and scientific perspectives (Gardner, 2017).

Some general values and uses of the Squamish traditional territory, that community members care deeply about are as follows::

- Secluded places for traditional cultural practices (e.g., storing regalia, vision quests);
- Wildlife and wildlife habitat; fish for fishing, and healthy rivers and streams,

- Clean air, and clean water for drinking, for the eco- system and for ritual bathing,
- Resources from which Squamish members can earn a living; and,
- Places to heal, recover and re-connect with the land (Gardner, 2017).

Tradition has been First Nation Peoples' way to pass along their history from generation to generation. However, due to systemic racism within the colonial systems, such as residential schools and allowing heavy industrial pollution on traditional territory, much of a generation got this knowledge sharing opportunity ripped away from them (Gardner, 2017).

Some ways that the history and culture of the Squamish Nation can be highlighted through this project is by bringing attention to the Sea-to-Sky Cultural Journey Corridor. The Sea-to-Sky Corridor is a route stretching north from Vancouver through Whistler and offers some of the most magnificent scenery. Besides the stunning scenery that can be seen along the journey— it is also a Cultural Journey. There are a total of 18 cultural journey kiosks with viewpoint signage on both sides of the highway with easily accessible pullouts (Centre, 2021). Every inch of the route is rich in mystery with First Nations oral history, supernatural beings, and place names. Leveraging this experience alongside information on the HSBR, will help assure that visitors have a well-rounded understanding of the area.

United Nations Sustainable Development Goals

Increasing awareness of the biosphere region could also help to increase awareness of the United Nations Sustainable Development Goals (UNSDGs), and what they mean for a community. Since both the biosphere and SDGs are products of the UN, communications to the public could likely reference both in a complimentary way. Many of the UNSDGs, such as Decent Work and Economic Growth, Climate Action, Life Below Water, and Life on Land (United Nations, n.d.). If people are able to find ways to thrive in the region while living and working by the UNSDGs, it is likely that practices such as sustainable tourism will also be easier to integrate into community development.

The below alternatives and recommendations take into account the UNSDGs, with a focus on limiting the environmental impact of any action taken to promote the region.

Alternatives and Recommendations

Taking into consideration the research that was conducted, a set of six alternatives has been created. With that, three of these alternatives have been selected and brought forward as the primary recommendations for the remainder of this project.

Alternatives

<p>Increase visual presence</p>	<p>For people to have a desire to learn more about the UNESCO designation, they must be aware that it exists. Visual elements such as signs or brochures are key.</p>
<p>Create a sustainable development goal plan for the biosphere region</p>	<p>Create a tangible action per goal that can be accomplished by the Biosphere. These goals may also be accomplished through our other alternatives.</p>
<p>Solidifying Indigenous empowerment</p>	<p>Solidifying Indigenous Empowerment is one of the most important factors in success for community based tourism and sustainable tourism development. Ensuring that the Indigenous culture, people and language are at the top of the list of priorities for the area will help create a healthy relationship that can be sustained and eventually could be the leader for the biosphere.</p>
<p>Workshop for tour operators</p>	<p>A workshop for tour operators in the area would allow for three things: (1) Awareness + Understanding, (2) Education and (3) Tools to succeed working within a biosphere region</p>
<p>Create tangible resources</p>	<ul style="list-style-type: none"> ○ Tangible resources of course are extremely important and would include brochures, QR codes, information books, business cards etc ○ Creating all of these graphics and tangible resources is out of the scope of our project, however, we can achieve some of these through recommendation #1- increase visual presence.
<p>Create a biosphere ambassador program to engage local residents and operators</p>	<p>Engage local operators and residents to create a place for the community to engage and learn from each other.</p>

Recommendations

Preliminary project recommendations include the following:

1. Increase visual presence of UNESCO biosphere region in the area

- This could include signs on Highway 99, features in local media, and displays at local attractions. This will help tourists to understand the physical boundaries of the biosphere and make them aware that they are in a biosphere region. This also includes an online presence such as QR codes to promote virtual brochures, and link trees, where a variety of resources

can be found. Paper brochures and posters are not recommended due to the cost of production and waste created.

2. Workshop for tour operators

- Setup an introduction workshop or program for tour operators to learn more about the biosphere and how it is an integral part of the region and their business. Teach tour operators to teach tourists about the richness and uniqueness of the area's nature, and why it is so important to protect it. Use this as an opportunity to explore sustainable tourism practices within the region. This can be done via zoom or in person. Through discussions with co-op student Sophie Cheshire, she noted that a tour operator had expressed to her their interest in having someone go to them to teach them about the biosphere region. The deliverable here would be creating a general agenda and information slides to support the workshop.

3. Biosphere Ambassador Program

- Create a local biosphere ambassador program for operators and locals to learn more and pass knowledge to others who are interested in learning about the region. This could be done by getting them to sign an oath to protect the area. For operators this could include a 'badge' that they can promote in their business, to show that they have made this commitment. Ways in which people would be recruited, as well as features to attract them, are as follows:
 - Recruit people through the information workshops.
 - Use Sophie's database of operators in the region to reach out.
 - Have an operator specific program, with forums available to them to discuss issues or new ideas.
 - Have a monthly workshop with guest speakers, who are experts or have extensive knowledge in certain fields. Examples of themes that could be touched on are truth and reconciliation, SDG's, and best practices. With the goal of connecting the community, local operators could also speak and share best practices they do, fostering a circular learning experience.

Conclusion

Research will continue for approximately the next month to pinpoint exactly what can be done to capitalize off of the UNESCO branding and educate visitors on the importance of the region. As popular destination for tourists near and far, Atl'ka7tsem Howe Sound is lucky to benefit from a healthy influx of tourists and a wide array of tourism businesses. Understanding how these businesses can operate in a way that benefits the biosphere region and does not negatively impact the environment will be key to successfully producing the deliverables of this project. The UNESCO certification was a great start in cementing the ecological importance of the region, and getting locals and visitors to understand why this is important will assist in making sure those who take advantage of the area's natural beauty also have an interest in its protection and conservation.

References

- Amazon of Europe. 2022. *A Transboundary Biosphere Reserve for the benefit of nature and people*. [online] Available at: <http://www.amazon-of-europe.com/en/biosphere-reserve/>
- Association, B. d. (2018, November). *Inquiry-based Ecological Explorations in the Bras d'Or Lake Biosphere*. Retrieved from blbra.ca: <https://blbra.ca/wp-content/uploads/Habitat-balance-final.pdf>
- Alteri, A. (2021, May 2021). *Learning Blooms in Outdoor Classrooms*. Retrieved from edutopia.org: <https://www.edutopia.org/article/learning-blooms-outdoor-classrooms>
- Amazing places*. Mount Arrowsmith Biosphere Region. (n.d.). Retrieved March 6, 2022, from <https://www.mabr.ca/amazingplaces>
- Canada, G. o. (2021). *Natural Tourist Attractions - UNESCO Biosphere Reserves*. Retrieved from Government of Canada: <https://open.canada.ca/data/en/dataset/f0b4b69e-8893-11e0-b8a0-6cf049291510>
- Centre, S. L. (2021). *The Self-Guided Cultural Journey Route through the Squamish and Lil'wat First Nations*. Retrieved from slcc.ca: <https://slcc.ca/wp-content/uploads/2016/07/SLCC-CulturalJourneyMapSpread-MedRes-08May2016.pdf>
- Chai-Arayalert, S., 2020. Smart application of learning ecotourism for young eco-tourists. *Cogent Social Sciences*, 6(1), p.177- 258.
- Clayoquot Sound . . . protecting what we love, together!* Friends Of Clayoquot Sound. (2022, March 3). Retrieved March 6, 2022, from <https://focs.ca/>
- Clermont, H., (Ed.), (2011). *The State of Mount Arrowsmith Biosphere Reserve: Global and Climate Change in Mountain Sites (GLOCHAMOST) Report 2011*. Available at: <http://www.mabr.ca>.
- Clayoquot Sound Biosphere Reserve, Canada - UNESCO*. (n.d.). Retrieved February 25, 2022, from <https://en.unesco.org/biosphere/eu-na/clayoquot-sound>
- CTC. (2015). *EQ Profiles*. Retrieved from Destination Canada: https://www.destinationcanada.com/sites/default/files/archive/2013-01-01/Tools_ExplorerQuotient_Profiles_2015_EN.pdf
- Content (2021) *Issue #1*.
- Documents*. Mount Arrowsmith Biosphere Region. (n.d.). Retrieved February 25, 2022, from <https://www.mabr.ca/documents>

- Francis, G., Millard, S. M., & Reed, M. (n.d.). *Clayoquot Sound Biosphere Reserve - Clayoquot Biosphere*. Retrieved February 25, 2022, from <https://clayoquotbiosphere.org/files/file/5d6f3daeb7149/CSBR-Periodic-Review-2010.pdf>
- Fournier, A. (2020, Aug 30). *School on the land: Indigenous teachings get kids outside the classroom*. Retrieved from cbc.ca: <https://www.cbc.ca/news/canada/school-on-the-land-indigenous-teachings-get-kids-outside-the-classroom-1.5705328>
- Fundy Biosphere Region. (2017, Oct 20). *Amazing Places in the Fundy Biosphere Reserve*. Retrieved from fundy-biosphere.ca: <https://www.fundy-biosphere.ca/en/explore-the-reserve/amazing-places>
- Futurium.ec.europa.eu. 2021. *Futurium | Border Focal Point Network - Mura-Drava-Danube: The European Amazon*. [online] Available at: <https://futurium.ec.europa.eu/en/border-focal-point-network/good-practices/mura-drava-danube-european-amazon>
- Gardner, J. (2017). *Cultural Continuity*. Retrieved from oceanwatch: <https://oceanwatch.ca/howesound/wp-content/uploads/sites/2/2016/12/OceanWatch-HoweSoundReport-CulturalContinuity.pdf>
- Gignac, J. (2020, Oct 04). *Tsá Tué Biosphere Reserve in the Northwest Territories takes centre stage in the first episode of the second season of TVO's Striking Balance*. Retrieved from The Narwal: <https://thenarwhal.ca/tsa-tue-biosphere-reserve-striking-balance/>
- Green Belt (2020), *A "Masterpiece of Living Art": the Niagara Escarpment*. Retrieved February 24, 2022 from https://www.greenbelt.ca/niagara_escarpment_blog
- Org, U. (2019, October). *Tsá Tué Biosphere Reserve, Canada*. Retrieved from unescobiosphere: <https://en.unesco.org/biosphere/eu-na/tsa-tue>
- Mohl, A., 2021. *The Amazon of Europe: World's First 5 - Country Biosphere Reserve*. [ebook] WWF. Available at: https://www.iucn.org/sites/dev/files/content/documents/2022/fs_tbr_mdd_2021.pdf
- Mohl, A., 2022. *UNESCO declares the world's first 5-country biosphere reserve along Mura-Drava-Danube*. [online] IUCN. Available at: <https://www.iucn.org/news/protected-areas/202201/unesco-declares-worlds-first-5-contry-biosphere-reserve-along-mura-drava-danube>
- Niagara Canada - *Tourism*, (n.d) Retrieved February 24, 2022, from <https://niagaracanada.com/key-sectors/tourism/>
- North, O. (2021, July 19). *Explore the Bras D'or and Wjinine'n pitu' Poq Scholarship Contest*. Retrieved from facebook.com: https://www.facebook.com/oceansnorth/posts/1209679879506203?comment_id=1209680859506105
- Striking Balance. (2020, Sep 9). *Striking Balance Season 2 Trailer*. Retrieved from youtube.co: <https://www.youtube.com/watch?v=WGrhf7p0DTs>

- Golub, S. (2021). Mura-Drava-Danube Transboundary Biosphere Reserve [Photograph]. UNESCO. <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/europe-north-america/croatiahungary/mura-drava-danube/>
- Thuncher, J. (2017, Oct 30). *About Howe Sound*. Retrieved from squamishchief : <https://www.squamishchief.com/in-the-community/about-howe-sound-3347304>
- Tourism in the Clayoquot Sound Biosphere Region*. (n.d.). Retrieved March 7, 2022, from https://clayoquotbiosphere.org/files/file/61a0110765e3f/CBT_Vital_Snapshot_Tourism_2021_Final.pdf
- UBC. (2021, N/A N/A). *Aboriginal Medicine and Healing Practices*. Retrieved from ubc.ca: <https://aboriginal.landfood.ubc.ca/resources/aboriginal-medicine-and-healing-practices/>
- UNESCO- *Niagara Escarpment Biosphere Reserve, Canada*. 2018. Retrieved February 24, 2022, from <https://en.unesco.org/biosphere/eu-na/niagara-escarpment>
- UNESCO. (2021). Unesco Biosphere Reserves Canada. Retrieved from unesco.org: <https://en.unesco.org/biosphere/eu-na/fundy>
- UNESCO. (2021). *Clayoquot Sound Biosphere Reserve, Canada*. [Photograph]. <https://en.unesco.org/biosphere/eu-na/clayoquot-sound>
- UNESCO. (2021). *Mount Arrowsmith Biosphere Reserve, Canada*. [Photograph]. <https://en.unesco.org/biosphere/eu-na/mount-arrowsmith>
- UNESCO. (2021). *Tsá Tué Biosphere Reserve, Canada*. [Photograph]. <https://en.unesco.org/biosphere/eu-na/tsa-tue>
- United Nations. (n.d.). *The 17 Goals*. United Nations Department of Economic and Social Affairs Sustainable Development. <https://sdgs.un.org/goals>
- UN-Water. n.d. *Transboundary Waters | UN-Water*. [online] Available at: <https://www.unwater.org/water-facts/transboundary-waters/>
- Van Cuong, C., Dart, P. and Hockings, M., 2017. Biosphere reserves: Attributes for success. *Journal of Environmental Management*, 188, pp.9-17.
- Zhongming, Z., Linong, L., Xiaona, Y., Wangqiang, Z., & Wei, L. (2021). World's first 5-country biosphere reserve will benefit people and nature in the 'Amazon of Europe'.