

# **Wells Gray – North Thompson and Robson Valley Global Geopark Project Feasibility Study**

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# Executive Summary

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**Global Geoparks are areas of geological heritage of international significance** where this heritage value provides a framework for sustainable economic development while at the same time respecting and safeguarding the natural environment.

This report examines the benefits to be gained from acquiring Global Geopark designation for the corridor from Barriere and Sun Peaks north to McBride and the Robson Valley, inclusive of Wells Gray Provincial Park. It recognizes the significance of tourism to rural economies and the alignment of the project with Destination British Columbia's redefined brand and direction for tourism development. It builds on *The North Thompson Valley Tourism Plan* and planning discussions related to the Province of British Columbia's Barriere to McBride Corridor Regional Economic Investment Pilot Initiative.

In assessing benefits, **a comprehensive review of Global Geopark practices** (and where relevant those relating to World Heritage Sites) was undertaken to assist in evaluating the implications on land-use, the types of geosites that could be recommended for inclusion in an application process, and the factors that need to be considered in moving forward with an application. These factors included establishing an effective management system; stimulating sustainable economic development and geotourism; providing academic research and educational activities that will communicate geoscientific knowledge and environmental and cultural concepts to the public; supporting the conservation and protection of geosites; and, contributing to the cooperation and exchange of knowledge and expertise in matters relating to the geological heritage.

To date there are 111 members in 32 countries that form part of the **Global Geopark Network (GGN)**. The majority of these are in Europe and China, with two now located in North America – Stonehammer Global Geopark in New Brunswick and Tumbler Ridge Global Geopark in BC. **The Global Geopark Network is a voluntary, non-legally binding network of member territories supported by the United Nations Educational, Scientific and Cultural Organization (UNESCO)**. Upon application to join the Network, applicants accept the GGN Charter (a code of conduct and best practice) and may voluntarily leave the Network at any time. While the designation recognizes the significance of the geological heritage and the way in which it shapes the natural and cultural heritage of a landscape, **a Geopark is not a legislative designation and its status does not override the existing planning structure and established land-use**. Pursuing designation and managing the unique properties of a Global Geopark is achieved within the context of existing land-use planning mechanisms, legislation and regulations, and aboriginal rights and title.

In considering the corridor for designation, it is to be regarded **as a series of multiple discontinuous sites linked thematically that provide public access to areas of outstanding geological significance**. The proposed Geopark area captures a number of the most spectacular geological events that gave rise to the North American continent. To create a cohesive unit under the label of a Geopark, it will be necessary to identify **geological themes** that can tie the various aspects, stories and visitor experiences together. The report outlines four preliminary themes that have the potential to unify the proposed Geopark experience: **Falls** (waterfalls), **Floods** (ice age glacier melts), **Fire** (volcanism) and **Faults** (underlying forces and faults which created the mountain and valley landscape). These themes can be readily illustrated in many of the existing 28 provincial parks, 54 recreation sites and

three regional parks that are currently accessible to the public, and it is likely that the majority of geosites to be proposed would be selected from these existing protected visitor sites.

### ***Benefits of designation***

The Geopark concept is based on a three-pronged approach that combines conservation, education and geotourism. With the strong underlying focus on sustainable development, **a Geopark has the potential to become a significant catalyst for economic development through attracting new markets and longer-stay destination visitors to the region.** Tourism is currently a key component of the regional economy and is estimated to be worth approximately \$70 million to the corridor, so the positive economic impacts from a Geopark designation are an important factor in informed decision making.

**A conservative analysis of the potential economic benefits of a regional Geopark estimates additional visitor spending to range from \$1.4M to \$2.8M by the fifth year of operation.** The analysis shows an increased utilization or expansion of existing businesses is anticipated together with the possible establishment of new businesses.

The North Thompson and Robson Valleys will benefit from a Geopark through an **enhanced ability to leverage the global growth in geotourism and the international prestige associated with the designation.** This in turn has the **potential to generate new opportunities to attract public and private investment**, and to strengthen its overall identity as a place to visit and live. Moreover, the emphasis on scientific research and working with the academic community will further raise the profile of the corridor, and will provide a strong platform for developing unique geotourism experiences for the current visitor and for **attracting new visitor markets – particularly European and Asian markets** that are already familiar with the designation.

### ***Recommendations***

**It is recommended that the Geopark project moves to the next stage of developing and submitting an application to the Global Geopark Network.** The steps involved in the application process and the implications of this recommendation are outlined. These relate to:

- Establishing an appropriate management structure;
- Identifying operational costs and funding implications;
- Developing a scientific research program;
- Engaging the community in the Geopark project;
- Identifying an appropriate name for the Geopark; and,
- Facilitating the development of geotourism.

**The overriding goal is to strengthen the regional economy through Global Geopark designation and to raise the international profile of the area's unique landforms and geological significance. This in turn will strengthen the existing tourism industry and the overall economic viability of the individual communities within the Valleys.**

# 1. Introduction

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## What is a Global Geopark?

Global Geoparks are areas of geological heritage of international significance where this heritage value provides a framework for regional sustainable economic development and a rationale for safeguarding the environment. While the significance of the geology is key to an area's designation, the purpose of the Geopark extends well beyond its geology to include all aspects of an area's natural, cultural and intangible heritage and their interrelationship with the geological heritage.

The concept is based on a three-pronged approach that combines conservation, education and geotourism. The underlying focus is to conserve the geological heritage and encourage its understanding and enjoyment by the public, with a commitment to supporting sustainable development. The process of applying for designation and managing a Global Geopark is grounded in the involvement of the local community – it is a community-driven initiative and must be characterized by strong local and regional ownership.

To be eligible for designation, a proposed area must include nationally or globally significant geological heritage elements consisting of<sup>1</sup>:

- Scientifically important, or especially striking, scenic, or unusual geologic phenomena;
- Historically important sites where particular geologic features, rock types, landforms or type specimens of fossils were first recognized and described;
- Outstanding examples of geologic features, structures, fossils, processes, and landforms; and/or,
- Historical sites where cultural events were tied to an area's geologic features, such as those in the history of geology, mining, and geology in early exploration and settlement.

## The History of Geoparks

Today there are 111 members in 32 countries that form part of the Global Geopark Network. As can be seen from the maps on the following page<sup>2</sup>, the majority of Geoparks are in Europe and China, with two now located in North America – Stonehammer Global Geopark in New Brunswick and Tumbler Ridge Global Geopark in BC.

In 2000 the European Geoparks Network (EGN) was established by four Geoparks with the intent to share information and expertise, and define common tools. In April 2001 the Network signed an official agreement of collaboration with UNESCO (Division of Earth Sciences). In 2004 the concept was broadened with the formation of the Global Geopark Network (GGN) assisted by UNESCO. Today the GGN is a voluntary, non-legally binding network of member territories. UNESCO continues to support the Network and is currently exploring a stronger link to the GGN through the

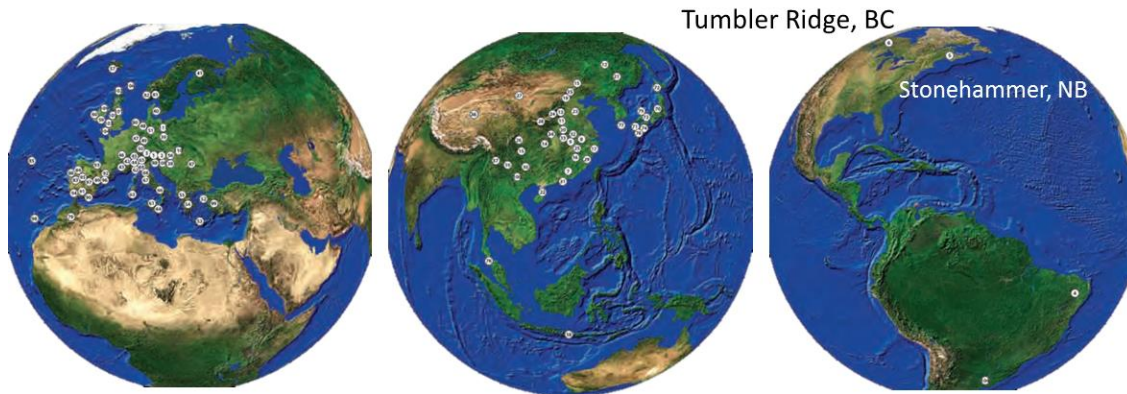
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<sup>1</sup> Canadian Federation of Earth Sciences, September 2010, *Guidelines & Criteria for Canadian sites seeking Geopark designation within the Global Geoparks Network*

<sup>2</sup> Source of maps: Global Geopark Network Poster 2014

creation of a UNESCO Global Geoparks Initiative. Upon application to join the Network, applicants accept the GGN Charter (a code of conduct and best practice) and can voluntarily leave the Network at any time. As links with UNESCO are strengthened, it is anticipated that the current voluntary framework would remain in effect.

### ***The distribution of Global Geoparks***



### ***The Global Geopark Network***

The GGN is governed by the Bureau of the Global Geoparks Network. This 12-member body is elected by the regional Geopark networks (such as the EGN) or co-opted by the members of the GGN on the basis of their experience in Geoparks. The International Union for Conservation of Nature (IUCN) and the International Union for Geological Sciences (IUGS) each have a place on the Bureau.

A prospective Geopark is applying for membership to the GGN – a dynamic network where members are committed to the exchange of ideas and work together to identify best practices and to raise the quality standards of all aspects of Global Geoparks. The GGN meets together every two years at the International UNESCO Conference on Global Geoparks and functions through the operations of regional networks and national committees.

Membership of the GGN is based on a set of strict criteria<sup>3</sup> and requires an aspiring Geopark demonstrate geological heritage of international value, though not outstanding universal value<sup>4</sup>, which is assessed by the IUGS. In addition, an applicant must prove that there is local community involvement, and that the 'Geopark' is active in the fields of education, sustainable development and conservation. Membership to the GGN is given for a four year period and is renewable on the basis of a revalidation exercise.

### ***The Canadian Geopark movement***

Within Canada, the interests of Global Geoparks are overseen by the Canadian National Committee for Geoparks, which falls under the auspices of the Canadian Federation of Earth Sciences. The

<sup>3</sup> UNESCO, January 2014, *Guidelines and Criteria for National Geoparks seeking UNESCO's assistance to join the Global Geoparks Network (GGN)*

<sup>4</sup> The foundation of the UNESCO World Heritage Convention.

Committee is responsible for establishing and maintaining a set national guidelines and criteria that relate specifically to Canada while following those developed by UNESCO; and, is the national body charged with receiving proposals from applicants wishing to establish Geoparks within Canada. The Committee has just launched a new website that presents an overview of Global Geoparks in Canada at [www.canadiangeoparks.org](http://www.canadiangeoparks.org).

In 2010 Stonehammer Global Geopark in New Brunswick was the first recognized Geopark in North America, and remained as such until Tumbler Ridge received the designation in September 2014.

Other Geopark initiatives within Canada include<sup>5</sup>:

- Bonavista Peninsula in Newfoundland submitted its letter of intent in 2013 and they were evaluated by the Canadian National Committee in 2013; the final submission is still under preparation.
- Percé in Quebec submitted its letter of intent in November 2013. A resubmission has been requested by the Committee.
- In addition to this project, other communities that have consulted with the Committee in the past two years indicating a desire to submit a proposal include Mont St. Pierre, QC; Sudbury, ON; Cabot Head, ON; Regional Municipality of Wood Buffalo, AB; Mount Cabox area, NL; and Charlevoix, QC.

As soon as three Global Geoparks are officially designated within the country, Canada will qualify for full representation on the board of the Global Geoparks Network.

## Context and purpose of study

### Building on the significance of tourism

Tourism is a key part of the BC economy and is one of eight sectors that the Province has clearly targeted for growth in the *BC Jobs Plan* (2012). Tourism revenues have increased by over 44% in the last ten-year period and are now valued at \$13.9 billion (based on 2013 data)<sup>6</sup>. The industry contributes \$7.3 billion to BC's gross domestic product (GDP), while sustaining 132,200 jobs within over 19,254 tourism related businesses. In 2012 the Thompson Okanagan region accounted for 20% of provincial overnight visitation and 14% of related spending<sup>7</sup>. The importance of tourism to the rural economy was emphasized in the Province's 2011 tourism strategy – *Gaining the Edge*, and remains an essential economic building block to areas such as the North Thompson and the Robson Valleys.

With the recent revitalizing of the *Super, Natural British Columbia*<sup>®</sup> brand, there has been a renewed acknowledgment that *nature is the magnet* – the compelling reason to visit BC<sup>8</sup>. *Our sea-to-sky topography sets us apart and makes us different: from the depths of the Pacific to the peaks of the Rockies and everything in between.* This distinctive characteristic of BC that is integral to its

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<sup>5</sup> Canadian Federation of Earth Sciences Council, November 2014, Geopark Report

<sup>6</sup> Destination BC, 2015, *The Value of Tourism in British Columbia: Trends from 2003-2013*

<sup>7</sup> Destination BC, 2015, *Thompson Okanagan Regional Tourism Profile*

<sup>8</sup> Destination BC, April 2015, *Our Brand* (v2.0)

very essence and personality is reflected in the underlying research on the brand – *travellers believe that the people of BC are positively shaped by their natural environment*. Finding new opportunities to elevate this competitive advantage and to build on the province’s perceived distinctiveness will have a positive impact on tourism growth, economic development, and on the Province’s ability to deliver on the essence of its redefined brand – *wild at heart*. Developing a new and compelling reason to visit the North Thompson and Robson Valleys through pursuing Global Geopark designation and enhancing the visitor experience associated with the corridor has the potential to leverage this opportunity, and to contribute to strengthening the competitiveness of the region and BC as a whole. More importantly, it has the potential to strengthen the appeal of the corridor and to reposition it as a ‘new’ destination – in turn attracting new visitors and motivating many existing travellers to stay longer and to spend more.

## The tourism planning context

The concept of a Geopark in the study area has been discussed in various settings. The Thompson Okanagan ten-year regional strategy<sup>9</sup> acknowledged the local interest in pursuing designation and identified it as one of three regional flagship projects. *The North Thompson Valley Tourism Plan* took this a step further and highlighted the need to complete a feasibility study on the implications of moving forward with a Geopark application for Wells Gray and the North Thompson Valley<sup>10</sup>. Recognizing the value of the concept to economic development, these planning discussions recommended extending the geographic scope of a feasibility study to include the entire corridor from Barriere and Sun Peaks north to McBride and the Robson Valley, so as to align with the Provincial Government’s Barriere to McBride Corridor Regional Economic Investment Pilot Initiative.

These planning discussions and subsequent research identified the importance of building political and community awareness of the project throughout the proposed area, and the need for leadership representing a cross-section of wider political and community interests for the process of moving forward. In response, a Global Geopark Project Steering Committee was established<sup>11</sup> and this study was commissioned to review:

- The benefits to be gained from acquiring the Global Geopark designation, including an understanding of trends elsewhere and an assessment of the economic impact for this particular project.
- The geographic scope of the project and its implications on land-use.

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<sup>9</sup> TOTA, 2012, *Embracing Our Potential: A ten-year tourism strategy for the Thompson Okanagan Region 2012-2022*

<sup>10</sup> There has been considerable interest in pursuing world designation for Wells Gray Provincial Park and a preliminary analysis had been undertaken on the two options – UNESCO World Heritage Site and Global Geopark, in terms of the implications for the application process – see Crawford Ecological Consulting, April 2011, *Two UNESCO designations for Wells Gray Country: World Heritage Site and Global Geopark*

<sup>11</sup> The Global Geopark Project Steering Committee is made up of representatives from: Simpcw First Nation, District of Barriere, District of Clearwater, Resort Municipality of Sun Peaks, Tourism Sun Peaks, Village of McBride, Village of Valemount, Thompson-Nicola Regional District, Regional District of Fraser-Fort George, Tourism Wells Gray, Thompson Okanagan Tourism Association, and Thompson Rivers University.

- The issues that will need to be considered in moving forward with an application, including implications associated with community engagement, Geopark marketing and management, conservation, tourism, education, and scientific research.
- The type of geosites that could be recommended for inclusion in an application process – recognizing the synergy between geodiversity and non-geological themes including culture, ecology, and history.
- The level of community interest in the initiative.
- The process involved in moving forward with an official application.

## Methodology

This study has involved the following steps:

- A comprehensive review of Global Geopark literature to gain a full understanding of the application process, Geopark trends, management practices, and the implications of designation. In addition to Global Geoparks, further time was spent looking at practices in a range of World Heritage Sites where sustainable tourism has been developed and promoted in a way that has contributed benefits to the local and regional economies.
- Discussions with geology experts and the preliminary identification of geological themes of international significance within the entire corridor and adjacent land mass.
- An economic impact assessment of Global Geopark designation for the corridor and projected growth trends in tourism.
- Ongoing discussions with the Steering Committee and with interested parties, including the Thompson Nicola Regional District North Thompson Community to Community Forum.
- A preliminary identification of geosites and a land-use impact assessment of a Geopark inclusive of these sites.
- Initial community discussions through a series of information sessions in Chu Chua for Simpcw First Nation, two sessions in Clearwater, and one in both Valemount and McBride. Approximately 80 people attended these sessions. The information sessions generated significant media coverage before and after.
- The development of recommendations for moving forward.

In addition to these steps, the project has involved attendance at the 6<sup>th</sup> International UNESCO Conference on Global Geoparks, held in New Brunswick at the site of Stonehammer Global Geopark in September 2014. Attendance and the delivery of a presentation on the Wells Gray North Thompson and Robson Valley Global Geopark project was a required initial step in the application process, and has officially identified the aspirations of the area to the GGN and the Canadian National Committee for Geoparks.

This report presents the findings of the research and the recommendations for moving forward.

## 2. Global Geopark Designation – Factors for Consideration

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The literature review of Global Geoparks, select World Heritage Sites and the 6<sup>th</sup> International UNESCO Conference on Global Geoparks have highlighted a range of potential benefits, opportunities and other factors that need to be taken into consideration in pursuing designation.

### Potential benefits

The potential benefits of designation are key factors in the rationale for pursuing Global Geopark membership. The research has highlighted the following:

- a) A catalyst for socio-economic growth largely through a direct increase in the level and value of tourism-based activity. The underlying emphasis on sustainable development in the GGN Guidelines and Criteria ensures that designation is likely to result in a strengthened local economy, particularly in rural areas. As such, the designation can be seen as a strategic approach to economic development and diversification and is consistent with the Thompson Okanagan Tourism Association ten-year strategy, the provincial tourism strategy – *Gaining the Edge*<sup>12</sup> and Destination BC’s corporate strategy.
- b) A heightened ability to leverage the global growth in geotourism<sup>13</sup> as an emerging niche sector, which in turn will increase the likelihood of attracting new visitor markets and increasing length of stay.
- c) International prestige – this has the potential to strengthen the destination brand, add value to existing brands, and improve access to funding for related community and tourism development.
- d) Increased opportunity to attract public and private investment to an area.
- e) Advancement of sustainable development concepts, including increased social cohesion, community capacity, and cultural awareness.
- f) Stimulus to raising interest in scientific research and educational initiatives.
- g) Sense of civic pride and a basis for a stronger place identity.
- h) Strengthened rationale for conservation.
- i) Access to a forum for national and international exchange of ideas and cooperation.

Within BC, the designation has the additional advantage of strong alignment with Destination British Columbia’s new brand and the Province’s focus on fostering remarkable experiences<sup>14</sup>.

These benefits will be further explored in subsequent sections of the report.

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<sup>12</sup> [Gaining the Edge](#): A Five-year Strategy for Tourism in British Columbia 2012-2016.

<sup>13</sup> Dowling, R.K., 2010, Geotourism’s Global Growth, published online by Springer

Farsani, N., Coelho, C. & Costa, C., 2011, Geotourism and Geoparks as Novel Strategies for Socio-economic Development in Rural Areas. *International Journal of Tourism Research*. 13, 68–81

<sup>14</sup> See [Our Brand](#) – and overview website: <http://www.destinationbc.ca/Resources/british-columbia-tourism-brand.aspx>.  
See [Our Corporate Strategy](#) – and overview website: <http://strategy.destinationbc.ca/strategy-at-a-glance/>.

## The challenges

The designation of Global Geoparks in Canada and North America in general faces two distinct challenges<sup>15</sup>. Neither is insurmountable, but understanding the nature of these challenges is important in planning for designation and ongoing operations.

- a) The term 'Geopark' can create resistance as a result of preconceptions relating to the concept of 'park'. The term is closely associated with city, regional, provincial and national parks and may inadvertently infer restrictions on land use and existing rights. In reality the designation is based on voluntary membership and UNESCO has no role in management or land-use policy. Qualifying the 'Geopark' term will assist in countering this challenge.
- b) Financial support for Geoparks from outside the immediately affected communities is likely to be limited and creative approaches to funding will be required. This is in contrast to the experience of the European Geopark Network where European Union funding has played a significant role in the development of their Geoparks. However, the designation status and the development of a comprehensive management and business plan should improve the ability of a collaborative partnership to access financial support and grant funding.

## The factors to be considered in becoming a Global Geopark

The following factors will need further consideration in developing the application submission and in considering the operations of a Global Geopark. Where relevant, practices identified elsewhere are used to illustrate possible approaches for the proposed Wells Gray North Thompson and Robson Valleys Global Geopark project.

### Spatial boundaries

The Canadian criteria<sup>16</sup> states that the types of sites that may be eligible for Geopark designation in Canada include:

- a) An entire land-management unit (or a designated part of it) that encompasses an area of outstanding geological significance. Lands managed by multiple use agencies (or organizations) are eligible if geologic resources span boundaries and are appropriately protected and publicly accessible.
- b) Multiple contiguous properties in which the area of outstanding geological significance crosses land ownership boundaries.
- c) **Multiple discontinuous sites in a thematic series that provide public access to areas of outstanding geological significance.** Individual site locations may be linked by a scenic byway, or through interpretive or educational materials that illustrate the area's geological significance.

With respect to this project, it is the latter that is applicable. As such any spatial boundary delineating the Geopark area is largely for marketing purposes and is likely to coincide approximately with political boundaries of jurisdictions actively supporting the concept. In terms of

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<sup>15</sup> Bailey, H. & Hill, W, 2010, The Future of North American Geoparks, *The George Wright Forum*, Volume 27, Number 1

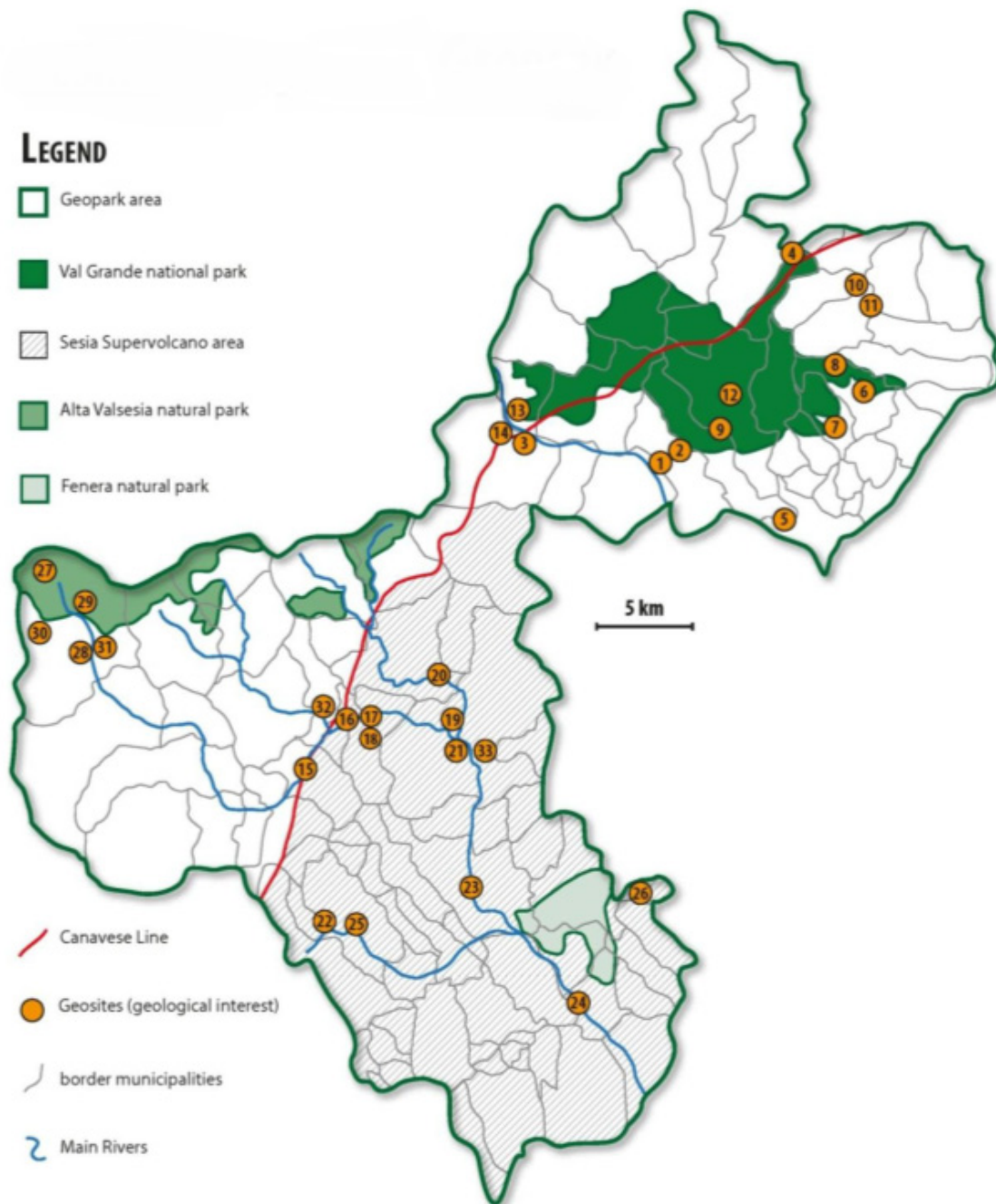
<sup>16</sup> Canadian Federation of Earth Sciences, September 2010, Ibid

the application submission it will only be the selected *multiple discontinuous sites* within this spatial boundary that will form the core of the Geopark concept, **although all communities within the “boundary” can expect to benefit from this association.**

**Global examples:**

There are a number of examples – both Global Geoparks and World Heritage Sites – where political administrative areas have been used to delineate a series of multiple discontinuous sites in a thematic series.

**Sesia-Val Grande Geopark – Piemonte, Italy (included in the GGN in 2013)**



The Geopark<sup>17</sup> in northern Italy consists of 85 municipalities and a population of almost 153,000 within an area 2,140 km<sup>2</sup>. The collective composite of these municipal jurisdictions represents the “spatial boundary” of the Geopark – all 85 municipalities have endorsed the Geopark. The application process was spearheaded by Val Grande National Park and Alta Valsesia Natural Park. Initially the two management authorities announced their candidacies separately, but then progressed with a joint application, given the common geological heritage and the enhanced ability to protect and promote the natural and cultural heritage within a consolidated area.

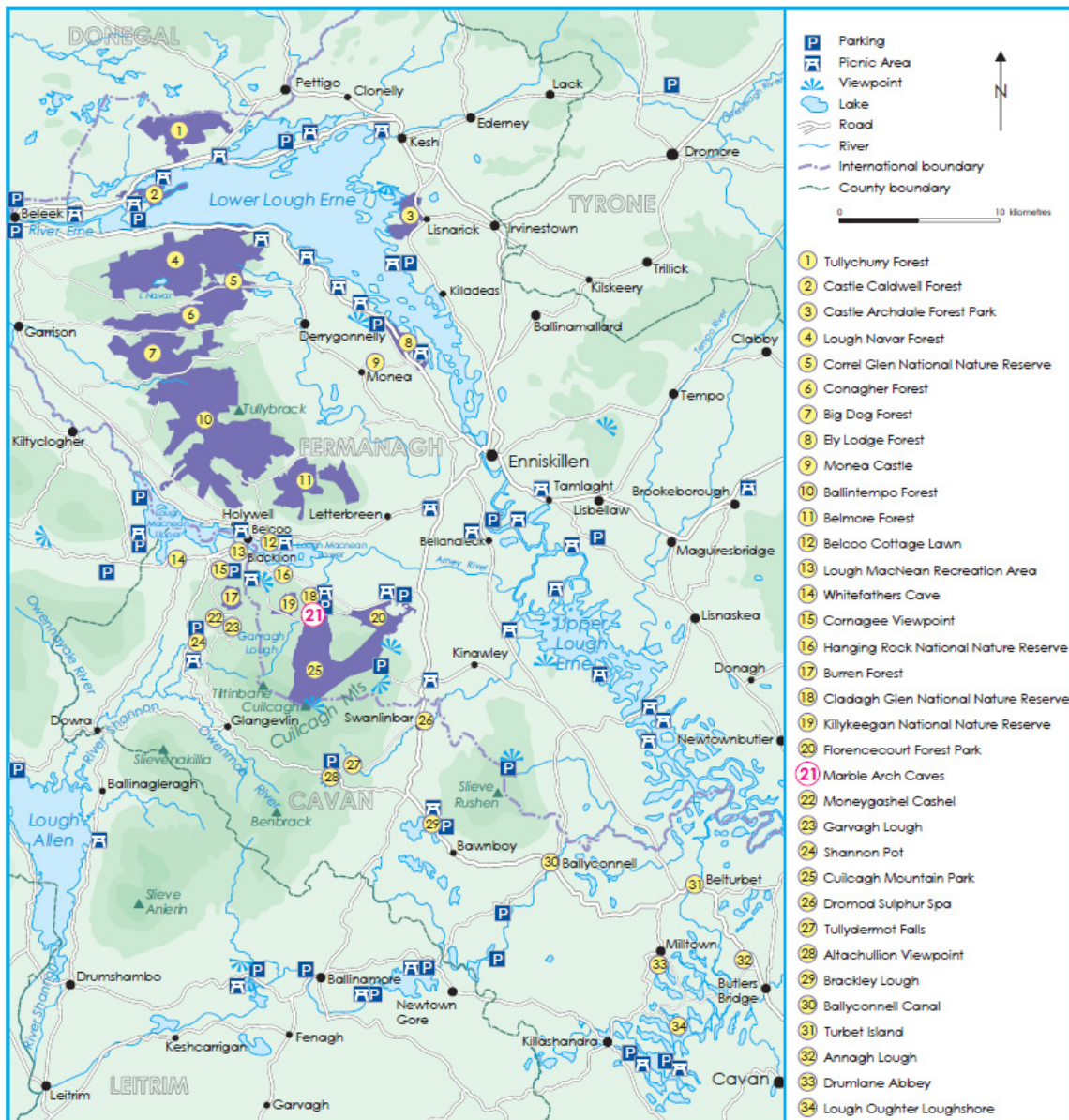
The municipalities within the designated area regard the Geopark as an important mechanism for economic development and one that complements the existing attractions provided by the natural environment of the valley and its rich cultural heritage. As can be seen from the map, the Geopark consists of the two main natural attractions, and a series of smaller geosites, including three UNESCO Heritage Sites.

### Marble Arch Caves Global Geopark – Northern Ireland and the Republic of Ireland

The Marble Arch Caves in Northern Ireland was opened as a tourist attraction in 1985. In 2001 the caves and the nearby Cuilcagh Mountain Park were recognized by the European Geopark Network, and subsequently by the new Global Geopark Network in 2004. In 2008 the boundaries were extended into the Republic of Ireland and today the Geopark is 30 times its original size. Management of the Global Geopark is now governed by a joint agreement between the Fermanagh District Council in Northern Ireland and Cavan County Council in the Republic of Ireland.



<sup>17</sup> Sesia - Val Grande Geopark, November 2012, Application Dossier



As the maps illustrate, the Geopark offers visitors a wide variety of sites of natural and cultural interest, walking trails, and water-based opportunities, although the Marble Arch Caves and Cuilcagh Mountain remain the centrepiece and the location of the Marble Arch Caves Visitor Centre. Today the benefits of geotourism are felt throughout the region<sup>18</sup> and the entire area has become a premier tourism destination in the North West of Ireland with the Geopark sites attracting over 300,000 visitors annually.

### Geological significance and identification of geosites

The application process requires developing a general scientific description of the entire area, identifying the geosites, and providing a description of each of the geosites in terms of:

<sup>18</sup> A recent economic impact assessment has estimated that the Geopark is contributing around 10% of regional tourism revenue - Marble Arch Caves Global Geopark, 2012, *Economic benefits of Marble Arch Caves Global Geopark*.

- Geological significance, outstanding geologic features and processes;
- Accessibility;
- Details on the interest of these sites in terms of their international, national, regional or local value (for example scientific, educational, aesthetic); and,
- Regional ecosystem, cultural historical information, and links to the area’s history and economy.

Given the geographic scope of the proposed area and the focus on discontinuous sites, the scientific description should emphasize the broad themes that will tie the Geopark together.

### **Global Examples:**

#### **Stonehammer Global Geopark, New Brunswick**

The Geopark has 58 identified geosites<sup>19</sup> in an area of 2,800 km<sup>2</sup>:

- Guided only and/or restricted sites – 29 geosites in total
- Sites used for education – 34
- Sites used for geotourism – 26
- Sites of international importance – 14

At time of application, the sites were ranked according to the Geopark Working Group’s assessment of their geological significance on an international to regional basis. Sites were further classified on the basis of management and anticipated use as follows:

- Geotourism – a site suitable for general geotourism (guided or self-guided).
- Geo-education – a site available for use by educational groups (schools, special interest groups).
- Guided interpretation – a site available for use only with Geopark guides.
- Restricted use – a site with additional restrictions due to the sensitive nature of the site, and/or private property restrictions. Use restrictions relate to the types of activities that can take place at the geosite, the number of visitors allowed on site, and the frequency of visitation.

### **Management system**

Establishing an effective management system is a prerequisite to a Geopark proposal being approved. This management system needs to reflect the “bottom up” process that underlies the Geopark concept and should demonstrate strong support from local political and community leaders and related organizations. The management system must be tailored in such a way that it can oversee the implementation of the management plan and is committed to sustainable regional socio-economic and cultural development through the Geopark, while protecting the landscape and the geosites under existing legislation. An effective approach is one that stimulates ongoing discussion and is based on collaboration and the development of strategic partnerships.

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<sup>19</sup> Stonehammer Geopark Working Group, 2009, *Stonehammer Geological Project – Geopark Project Application*

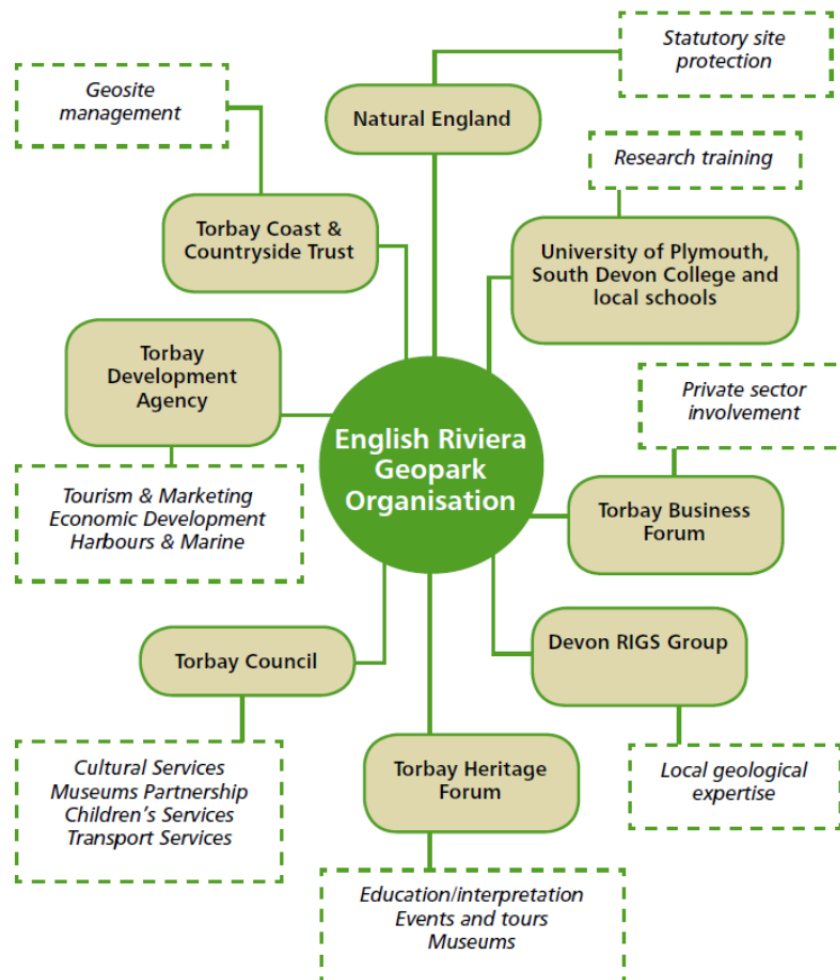
## Global examples:

### English Riviera Global Geopark, England

The English Riviera Global Geopark in Torbay received its designation in 2007. The work was initiated by a local interest group, the Torbay Heritage Forum; and, following an unsuccessful initial bid in 2004 the local government, Torbay Council, partnered to take the lead in the second application process. The approach to its management outlined in the application and maintained since designation has been achieved through the establishment of the English Riviera Geopark Organisation (ERGO) – a consortium of partners already involved with managing Torbay’s heritage.

The partners in this formally constituted body each have responsibilities to maintain their existing role and to contribute to the following aims:

- To co-ordinate the management of the English Riviera Geopark;
- To promote, support and facilitate, encourage and enable local projects, initiatives and events that help protect and raise awareness of Torbay's geological heritage; and,
- To strengthen existing partnerships and develop new networks to ensure that the geological qualities of the English Riviera Geopark are sustained and promoted for current and future generations.



The management framework illustrated above<sup>20</sup> emphasizes the importance of ensuring that the geosites and themes with links to the geological heritage (archaeological, ecological, historical or cultural) are high on the agenda within the region's economic regeneration framework for sustainable development. The management goals and objectives are achieved through involving stakeholders at a number of levels:

- a) The Geopark Management Group (GMG) – stakeholders sign up and agree to adhere to the ERGO constitution and code of conduct, and attend management group meetings. New members are approved by existing members. The GMG is comprised of representatives from all of the key partners including amongst others Torbay Council, Torbay Coast and Countryside Trust (the local conservation charity responsible for the management of the majority of sites), and the Torbay Development Agency (the local Community Development Trust which represents all of the local community partnerships).
- b) Scientific panel of experts with responsibilities to review research proposals, highlight research potential, assist with any interpretive work, advise on educational development and act as Geopark ambassadors within the academic world. The panel consists of members from a range of academic institutions, the British Geological Survey, Natural England<sup>21</sup>, freelance geologists, and the Natural History Museum (London).
- c) Working groups on site access and conservation, education and community, and tourism and marketing.
- d) Promotional partners – a private sector-led public/private tourism partnership leading on the official promotion of the English Riviera. These partners play a key supporting role in raising market awareness of the destination using its geological heritage.

All Geopark Partners have signed up to the English Riviera Geopark Charter<sup>22</sup> and contribute funds and/or services to the work of ERGO. On the basis of this commitment they are eligible to use the Geopark logo.

In terms of staff, there is only one paid employee whose time is solely dedicated to Geopark work. The Geopark Coordinator is employed by the Torbay Council and reports to both the Council and the Geopark Management Group. All other Geopark related work and activities are fulfilled by the staff of partners.

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<sup>20</sup> [http://www.englishrivierageopark.org.uk/section\\_main.cfm?section=114](http://www.englishrivierageopark.org.uk/section_main.cfm?section=114) ; Application Dossier; and personal communication.

<sup>21</sup> The government's adviser on the natural environment, providing practical scientific advice on how to look after England's landscapes and wildlife.

<sup>22</sup> The Charter states:

- I understand the "English Riviera Global Geopark" logo is a registered trademark and can only be used under license issued by the English Riviera Geopark Organisation. I will not distribute, electronically or otherwise, the logo to any third party without the express permission of ERGO
- I will undertake to comply with the "Guidance on retailing original geological material" and will not retail original geological material.
- I will undertake to promote the conservation and enhancement of the natural beauty of the English Riviera Geopark.
- I will undertake to champion the organisation's vision for the English Riviera Geopark and its communities, as set out in the English Riviera Geopark Management Plan.
- I will undertake to promote, support and play a full and active part in the work of the organisation in fulfilling its roles and responsibilities.
- I will undertake to assist the organisation in achieving an independent and apolitical profile in the performance of its functions.

## Stonehammer Global Geopark, New Brunswick

Stonehammer Global Geopark is based on a shared philosophy and vision with organizations, communities and individuals working together to<sup>23</sup>:

- Celebrate, interpret, promote, and enhance the unique geoscientific knowledge and environmental concepts, as well as local natural and cultural heritage with the public, both locally and globally;
- Conserve the significant geological features of the region for sustainable and continued use by future generations; and,
- Use and enhance these assets for the purposes of encouraging the creation of local enterprises connected with geotourism, and to further stimulate sustainable socio-economic development in the region.

The management structure has been developed as a community project based on a partnership of five municipal governments, including the City of Saint John, the Province of New Brunswick, university and museum scientists, the tourism industry and public interest groups. The model is based on the recognition that with 58 geosites in different types of ownership, effective operation could only succeed through a partnership-based approach that can leverage the resources, while enabling the Geopark to operate under the governance of a single unit and be packaged as a single entity.

The Stonehammer Geopark Authority is led by a Board of Directors where each Director represents specific interests and roles within the Geopark:

- The New Brunswick Museum – technical expertise: provides core research, preservation and interpretation services along with ongoing training and support services;
- Province of New Brunswick – technical expertise;
- Saint John Waterfront Development – developer for the proposed Geopark Hub Site and Interpretation Center;
- City of Saint John – has ownership of four major geosites;
- Tourism Saint John – ensures that the Geopark message is integrated into the broader tourism brand/message;
- Geopark direct operators – ensure that operators align with the vision of the Geopark and remain engaged in the process, operations and development of the Geopark – elected by membership; and,
- Community representatives – ensure that the community remains engaged in the vision and direction of the Geopark – elected by membership.

The broader management structure is membership-based with two key categories of members and a third category for interested parties:

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<sup>23</sup> Stonehammer Geopark Working Group, 2009, *Stonehammer Geological Project – Geopark Project Application*, and the Geosite [website](#)

- a) Geosite owners – responsible for the management of the site and its branding within the Geopark context.
- b) Operators:
  - a. Direct operators that deliver a fee-based product at a geosite;
  - b. Indirect operators that operate within the boundaries of the Geopark but not at one of the geosites.
- c) Associate members – organizations or individuals who do not operate a business but wish to be engaged in the Geopark.

Geosite owners are expected to meet a range of operational criteria to ensure the quality, integrity and authenticity of the Geopark concept in return for training and assistance with program development, and recognition in Stonehammer marketing and promotional print and on-line material.

Operators pay an annual membership fee. Direct operators operating a ‘Stonehammer program’ may do so once assessed and approved, for a fee. Programs must meet quality expectations for content and visitor experience. Here again, these operators are given priority placement in Stonehammer online and offline marketing collateral. Indirect operators may have themed materials within their operation – e.g. a Stonehammer restaurant menu. All related retailed products must be reviewed and approved and can only be sold by direct and indirect operators, and site owners.

Much of the work for the Stonehammer Geopark Authority is carried out by ad hoc and working committees of the Board. Working committees have been established for:

- Finance and administration;
- Strategic planning;
- Stewardship, education and preservation;
- Community connections;
- Economic development and marketing;
- Corporate (major funding corporate sponsors); and,
- Cultural connections.

In addition, a Technical Advisor Group holds an annual review of the Geopark operations and can be called on to advise on a range of knowledge areas. Technical experts have agreed to provide advice on an ongoing basis. The day to day operations, communications and community engagement is carried out by two part-time contractors.

## Sustainable economic development and geotourism

One of the main objectives of the Geopark program is to stimulate sustainable economic activity that is culturally and environmentally sustainable. It is anticipated that establishing a Geopark will generate new sources of revenue through the growth of geotourism and geo-products, and through the creation of innovative local businesses and the strengthening of the arts, cultural and heritage

sectors. Rural geotourism, in particular, has been identified as a growth area<sup>24</sup> and consideration must be given to new ways of creatively linking economic activities to the area's geological heritage and landscape. Experience elsewhere demonstrates the need to work closely with the tourism and business sector to assist operators and businesses with understanding the opportunity and the importance of developing quality visitor experiences and products that can be branded under the Geopark label. In areas where tourism is already well established, the Geopark designation provides an opportunity to add value to the existing destination experience, and to generate increased revenue through increasing the length of visitor stay and the level of expenditure within the area.

The research and the UNESCO Global Geopark Conference in Stonehammer have demonstrated that there are a number of critical factors in successfully stimulating incremental economic activity. These include:

- Strong community engagement and commitment to the Geopark vision<sup>25</sup>.
- Innovative Geopark branding and a strategic approach to marketing the destination<sup>26</sup>.
- Clear themes and stories that tie the different elements of the Geopark together.
- A quality assurance program that ensures the integrity and authenticity of the Geopark experience.
- Training and awareness building – the community should be well informed and have a general awareness of the geological values of the area.
- Integrating new and immersive visitor experiences that celebrate the geological heritage and the related cultural and ecological significance into the existing destination visitor experience in a way that appeals to mainstream tourists and niche geo-tourists alike.
- Strong partnerships between the public and private sector, including the corporate sector.
- Maintaining the authenticity and integrity of the destination – according to National Geographic<sup>27</sup>, geotravellers “go local.” They support locally owned businesses and guides. They buy from local craftspeople, eat at local restaurants serving local foods and look for local expression of arts and culture.

### ***Global examples:***

#### **Wadden Sea World Heritage Destination, Netherlands, Germany and Denmark**

While not a Global Geopark, the Wadden Sea World Heritage Destination (inscribed in 2009) provides an interesting case-study on a trans-national collaborative approach to bringing about positive changes to the tourism sector, while at the same time seeking to maintain the integrity of

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<sup>24</sup> Farsani, N., Coelho, C. & Costa, C., 2013, Rural Geotourism: A New Tourism Product, Acta Geoturistica volume 4, number 2.

<sup>25</sup> Farsani, N., Coelho, C. & Costa, C., 2011, Ibid,

Dowling, R. & Newsome, D. (2010) Geotourism: a Global Activity. In Dowling, R. & Newsome, D. (eds.) Global Geotourism Perspectives, Oxford.

<sup>26</sup> Geopark and Geotourism Development at Siljan Lake – [online article](#)

<sup>27</sup> National Geographic: [http://travel.nationalgeographic.com/travel/sustainable/geotraveler\\_tips.html](http://travel.nationalgeographic.com/travel/sustainable/geotraveler_tips.html)

the World Heritage Site. Whether collaboration is at transnational level or intra-regional level as in the North Thompson-Robson Valleys, the principles remain the same.

Wadden Sea<sup>28</sup> is the largest unbroken system of intertidal sand and mud flats in the world, with undisturbed geological and ecological processes throughout most of the region. The area is already a major tourism destination, so the aim is to develop a framework for sustainable tourism that will highlight and preserve the unique scientific value of the area, while strengthening tourism through an approach that ensures a commitment to stakeholder engagement, consistent marketing and communications, and the development and delivery of quality visitor experiences.

The trilateral Task Group have identified four objectives<sup>29</sup>:

1. *Ensure all stakeholders have a transnational understanding and appreciation of the values of the Wadden Sea World Heritage.* This is being achieved through training, information sharing, networking and the development of educational resources.
2. *Ensure stakeholders take responsibility for and contribute to the protection of the 'Outstanding Universal Value' through involvement in tourism management and product development.* The region is working toward common tourism planning and management schemes for the entire World Heritage; and is in the process of developing a strong destination brand as a starting point for the development of common standards and a quality scheme.
3. *Ensure the tourism sector provides consistent communication and marketing and promotes the high quality tourism offers of the Wadden Sea World Heritage Destination.* This will involve the development of a consistent trans-boundary marketing strategy and the integration of World Heritage marketing into existing regional and national marketing activities.
4. *Ensure nature conservation, tourism and local communities benefit from the World Heritage Status.* This is being promoted through enhanced engagement of stakeholders in transnational cooperation on World Heritage, and through increased appreciation of nature protection as the basis for economic and social welfare.

### **Jurassic Coast: Dorset and East Devon World Heritage Site, England**

The Dorset and East Devon Coast World Heritage Site which is more popularly known as the Jurassic Coast, is England's first and only natural geological World Heritage Site. The Site is a 153 km stretch of the south coast. Achieving WHS status in 2001 has resulted in the emergence of a clear national identity for a stretch of coastline that previously had no unifying sense of identity and marketed under a variety of brands. A strategic approach has been developed to using the inscription to strengthen the regional economy and the overall visitor experience.

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<sup>28</sup> The Wadden Sea stretches for 14,700 km<sup>2</sup>, and 11,000 km<sup>2</sup> of this is National Parks and conservation areas that make up the World Heritage Property.

<sup>29</sup> Trilateral Task Group, 2014, *Sustainable Tourism in the Wadden Sea World Heritage Destination*.

The following initiatives<sup>30</sup> illustrate the steps that have been taken to leverage the new identity:

- A key emphasis has been placed on ensuring that local communities and business are inspired by World Heritage status, with the intention of generating new local activity that is high quality and consistent with World Heritage principles. Ten coastal towns along the Jurassic Coast are positioned as 'Gateway Towns' to the World Heritage Site as they are ideal points of access to the Jurassic Coast. This assists in spreading the economic benefit regionally. In addition, a new Jurassic Coast Quality Business Scheme has been introduced. Membership of the scheme through accreditation offers businesses a range of marketing and service benefits, such as training, and is playing an important role in improving the quality of services to visitors. The program is building a supportive base of local advocates and an innovative approach to partnership-based fund raising initiatives.
- The development of a strong brand identity and its strategic application is central to the Jurassic Coast marketing strategy. The brand has increased media recognition and is used to not only brand formal information, but to also co-brand within the region across a broad spectrum of services and products.
- The area offers a wide range of different stories to be used in helping the visitor discover the destination. To assist in creating consistency in story-telling and interpretation, five primary themes were identified: 'worlds of the dinosaurs', 'the ever-changing coast', 'birthplace of a science', 'geology for the future', and 'a World Heritage Site for today and tomorrow'. This themed approach to presenting the destination has provided new impetus for smaller community museums and visitor centres to become engaged, and recent work has focused on developing a series of small exhibitions in the various museums, including telling the story of the local extractive industries. Jurassic Coast is now looking to build on this emphasis on interpretation and has recently unveiled plans for a proposed £80m underground dinosaur-themed museum which would be built in a semi-subterranean cavern in a 40 meter deep quarry in Dorset under a translucent roof. If the project goes ahead it will be open by 2021 and will allow visitors to experience what the Dorset coast was like 150 million years ago, with anticipated potential of generating an estimated £7m annually.
- The development of a multi-faceted Jurassic Coast Arts Program. Partners in the program work in a range of fields from cultural tourism through participatory arts, to arts and science collaborations with local, national and international partners, where art is used as a platform for developing a deeper understanding and awareness of the WHS's 'Outstanding Universal Value' and a means of generating new visitation to participating sites. A Public Art Code of Practice ensures that all work is culturally and environmentally appropriate. Temporary work or events must tread lightly on the land, and permanent work is based on

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<sup>30</sup> The material is derived from a number of sources and publications including the Jurassic Coast website, *Dorset and East Devon Coast World Heritage Site Management Plan 2009-2014*; *An Economic, Social and Cultural Impact Study of the Jurassic Coast* (2009); *Jurassic Coast Business Partners* (2013); *Creative Coast: A case study in how the arts can support management of a natural World Heritage Site* (2013); and Common Wadden Sea Secretariat, 2012, *Implications of World Heritage Site status for planning and managing tourism* (report on a study visit to the Jurassic Coast World Heritage Site).

integrating the artistic components into new public realm developments, walkways, parking lots etc. Examples of projects include:

- The Cabinet of Curiosities – an interactive museum cabinet which encourages children of all ages to explore the science of the coast. It was designed to be transportable by car and is available for organizations to borrow.
- An award winning photographer worked with geologists to develop a touring exhibition that included an audio-visual presentation presenting a fusion of photography and digital imagery, music and poetry, and a sculpture made from flotsam and jetsam.
- Walk of Life – an ongoing program of experiential workshops working creatively through movement, and giving participants a new way of experiencing the natural environment and increasing their sensitivity to and awareness of their surroundings and themselves.

The program stimulated the development of flagship projects for London 2012 – the Summer Olympics, with initiatives such as the Jurassic Coast Earth Festival.

- The WHS status is being used to expand business into the winter and shoulder seasons. An events calendar highlights a range of interpretive and activity events in these seasons; and visitor management strategies focus on easing the pressure of large numbers at popular locations through a marketing strategy that is sensitive to capacity issues, improved visitor orientation, the implementation of a sustainable public transportation strategy, and improved signage and access to trails.

## Education and science

A Global Geopark must provide, organize and support educational activities that will communicate geoscientific knowledge and environmental and cultural concepts to the public – informally through museums, interpretive and educational centres, specialized activities for children, trails, guided tours, popular literature and maps, and modern communication media; and formally through pre- and post-secondary educational programs. The success and integrity of these educational programs will depend on building strong and active relations with the scientific community. Ongoing research and the development of new scientific understanding should be an integral component of Geopark activities and can only be effectively nurtured through cooperation with the ‘expert’ community, including museums, the Geological Survey of Canada, and provincial geological surveys.

On the basis of this research there is an expectation that there will be a transfer of knowledge and outreach programming that will allow schools, local and national, to assimilate this knowledge into the curricula. Equally, the success of this knowledge transfer to all audiences will depend on the content of tourism programs within the Geopark, competent and knowledgeable staff and/or tourism operators, and a commitment to building capacity through training programs for businesses, operators and front-line staff. Likewise, the role of local residents and the media is important in communicating Geopark values and significance.

Educational outreach programs vary considerably depending on the management structure, Geopark staffing levels and ability to work through partners.

## *Global examples:*

### **Stonehammer Global Geopark, New Brunswick**

Building awareness and knowledge of the new Geopark is being carried out in a variety of ways<sup>31</sup>:

- On-site branded interpretive signage, on-site interpretive experiences provided by site owners, commercial interpretive experiences provided by operators, and the activities of the New Brunswick Museum.
- Annual training sessions for local businesses.
- The development of a schools program. This work is undertaken by a part-time education coordinator employed by the Geopark. The initial focus was on working with teachers known to have a keen interest in the related subject matter. This has been expanded to delivering workshops for teachers in general every two years. Field activities are offered at a range of publicly accessible sites through site staff – e.g. the Irving Nature Park, a 243 hectare site created by J.D. Irving Limited, to help protect an environmentally significant area. The availability of free interactive educational programs and activities pre-dates the designation of the area as a Geopark. These programs are now based on interpreting the significance of the site within the context of the Geopark. A range of resources on the Stonehammer website offer ideas and advice to teachers looking for ways of integrating the Geopark topic into their learning activities.
- Plans are in place for the development of a summer Geopark program that would be offered to local youth in conjunction with existing camps. Outreach activities are also linked to key community festivals and events such as Canada Day to raise local awareness.

## **Site conservation**

Geological resources are non-renewable. While the branding of an area as a Global Geopark does not affect the legal status of the land, the conservation and protection of geosites must be regarded as a key priority in the management of a Geopark. It is expected that a Geopark continues to work within the parameters of existing municipal, provincial and federal legislation and land-use management policies that relate to the specific land area, and that management decision making includes input from Geopark partners to ensure the integrity of the Geopark. The Geopark program supports compatible economic uses of geosites, and in this way is positioned somewhat differently to many other park designations where preservation and conservation often seem to exclude the needs of the local people living in the area<sup>32</sup>. A Geopark seeks to find a balance and may include or 'permit' uses that would disqualify a site for designation under other UNESCO programs, such as the World Heritage or Biosphere Reserve programs.

*Ultimately, a Geopark should explore and demonstrate methods of best practices for conserving the area's geological heritage while balancing economic development and tourism<sup>33</sup>.*

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<sup>31</sup> Personal communication with the Stonehammer Global Geopark coordinator and on-site observations.

<sup>32</sup> Bailey, H & Hill, W., 2010, The Future of North American Geoparks, The George Wright Forum.

<sup>33</sup> Canadian Federation of Earth Sciences, 2010, Guidelines & Criteria for Canadian Sites seeking Geopark designation within the Global Geoparks Network (GGN)

## **Global examples:**

### **North Pennines Global Geopark, England**

The North Pennines was awarded the status of European Geopark in 2003. The geographical area is also designated as an Area of Outstanding Natural Beauty (1988) under UK legislation and is recognized as a Category V Protected Landscape by the International Union for the Conservation of Nature (IUCN). Management and conservation of the Global Geopark continues under the direction of the North Pennines AONB Partnership – an alliance of statutory agencies, local authorities and voluntary or community organizations which care for the area – with work carried out through the AONB staff unit employed through the County Council. While the *AONB Management Plan* continues to guide the conservation and land-use of the area, a Geodiversity<sup>34</sup> Action Plan has been prepared that focuses on how the AONB Partnership and related partners can make the most of the area's geodiversity for education, interpretation and geotourism. The plan also addresses how partners can work together to increase overall knowledge and understanding of geodiversity and ways to conserve any features which may be under threat. This document builds on auditing work undertaken by the Partnership and the British Geological Survey in 2003, and the development of an initial action plan.

The Geodiversity Action Plan looks at:

- The AONB Partnership's geodiversity work and its role as a European/Global Geopark, including the need to expand the emphasis on geodiversity;
- Understanding more about geodiversity in the North Pennines – (i.e. continuing to support research);
- Conserving the geodiversity;
- Interpreting the geodiversity and supporting geotourism – (including increasing awareness of geodiversity, and integrating the interpretation of priority geological sites and features into other aspects of the area's interpretation through undertaking a range of interpretive initiatives); and,
- Education and lifelong learning about the North Pennines' geodiversity – with a particular emphasis on increasing opportunities for schools to use the Geopark for the study of geodiversity.

## **Collaboration – the Global Geopark Network**

The Global Geopark Network provides a platform of cooperation and exchange of knowledge and expertise in matters relating to geological heritage. It advances the development of the Geopark concept through identifying models of best practice and setting quality standards. A member of the Global Geopark Network is expected to contribute actively to the Network through collaborative initiatives with other Geoparks, contributing articles to the GGN Newsletter, and attending the conferences. UNESCO in turn plays a strong awareness-raising role with Member State Ambassadors, ensuring that they have a good understanding of Geoparks.

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<sup>34</sup> North Pennines Area of Outstanding Natural Beauty and European Geopark Geodiversity Action Plan 2010–2015. In defining geodiversity, it is seen as *the variety of geological environments, phenomena and processes that make those landscapes, rocks, minerals, fossils and soils which provide the framework for life on Earth. Geodiversity makes the links between people, landscape, biodiversity and culture and is one of an area's chief natural resources.*

## ***Global examples:***

### **6th International UNESCO Conference on Global Geoparks, Stonehammer**

The conference was attended by 480 delegates from 30 countries, including Jean-Pierre Blackburn, Canada's Ambassador to UNESCO who delivered the opening address and attended the event in full. The conference included key note presentations and a series of break-out sessions on the following subjects:

- Geoparks and sustainable use of natural resources.
- Engaging communities – strategies on capacity building, creating awareness, working with partners and developing funding.
- Education and interpretation in Geoparks – insights on communication practices, the use of new technologies and educational programming.
- Aspiring Geoparks – including a session on the Wells Gray North Thompson-Robson Valleys Global Geopark Project.
- Mature Geoparks – discussions on maintaining success, including successes and failures with the re-evaluation process.
- UNESCO collaboration – building relationships and developing partnerships between Global Geoparks and other UNESCO programs (Man and the Biosphere Programme, World Heritage Sites, International Geosciences Programme) that are near or within the footprint of the Geopark.
- Intangible cultural heritage – approaches to highlighting cultural diversity and traditional knowledge.

The event also included a series of field excursions into Stonehammer Global Geopark. The 7<sup>th</sup> International UNESCO Conference on Global Geoparks will be held in the English Riviera Global Geopark, England in September 2016.

### **Northern Georoutes**

The GEO2NOR project aims at capitalizing on tourism experiences within the NORA (Nordic Atlantic Cooperation) region and developing innovative ways of promoting geo-tourism in Norway, Iceland, Scotland and Canada through the Global Geoparks Network. The collaborative is led by Magma European and Global Geopark in Norway, and includes Stonehammer. Various initiatives are underway involving the development of a mobile app, branding, marketing and communications actions, packaging of Geopark experiences, and the testing of a pilot booking system.

### **Tumbler Ridge Global Geopark**

After attaining designation last year, Tumble Ridge Global Geopark is already exploring opportunities to twin with other Global Geoparks. In particular, it is looking at establishing a twinning relationship with Yanqing Global Geopark in China – a Geopark with dinosaur tracks similar to those found in Tumbler Ridge<sup>35</sup>. With the strong interest in Geoparks in China, it is anticipated that a twinning arrangement could motivate travel to northern BC from the growing number of Chinese visitors to the province.

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<sup>35</sup> <http://www.northeastnews.ca/tumbler-ridges-global-geopark-looks-to-china-for-partnership/>

### 3. Proposed Area

This section of the report reviews the anticipated geographic scope of the Geopark and its current planning framework that would remain in place, if designation is successfully pursued.

#### Boundaries of the Global Geopark Project

The physical boundary of the proposed Geopark is shown in the map. It is transected by Highway 5 and 16 between Heffley Creek in the south and McBride in the north, and includes almost all of the North Thompson Valley and the southern portion of the Robson Valley. Wells Gray Provincial Park is entirely within the boundaries and represents a core element of protected values and sites.

The corridor is approximately 380 kilometres north to south and has a population of approximately 10,200 (2011).

The area overlaps with the following major land use administrative boundaries:

Regional Districts:

- Fraser-Fort George – Electoral Area H
- Thompson-Nicola – Electoral Areas A, B and O

Municipalities:

- Village of McBride
- Village of Valemount
- District of Clearwater
- District of Barriere
- Sun Peaks Mountain Resort Municipality



The area also overlaps with the traditional territories of the Secwepemc Peoples.

#### Planning framework

##### Land and Resource Use

Land use in the proposed Geopark area is currently overseen by the provincial government and local governments. Federal jurisdiction in the study area is negligible, limited mainly to Indian Reserves.

The Province of British Columbia operates within a framework of policies that govern the

disposition, administration and management of Crown land. The policies, which are developed in consultation with other provincial agencies and stakeholder groups, establish principles on land use, allocation, tenure term, pricing and all other aspects associated with Crown land.

Sustainable management of provincial Crown Land and resources is guided by legislation (for example: the *Land Act*, the *Forest Act*, the *Forest and Range Practices Act*, the *Wildlife Act* and the *Mineral Tenure Act*), as well as a comprehensive policy framework which is reflected in resource management objectives established through land use plans and legal orders. The Land Use Planning and Objectives repository contains land use plans and related documents, land use objectives orders, and policy and guidance related to establishing objectives and plans.

The following land use plans are in force within the study area:

- Kamloops Land the Resource Management Plan (LRMP)
- Robson Valley LRMP
- Eight Peaks Sustainable Resource Management Plan (SRMP)
- Valemount to Blue River Winter Recreation SRMP

These plans have individually and collectively recognized the exceptional natural features and environmental assets of the North Thompson and Robson Valley corridor, and their surrounding environs, while also acknowledging the need for continued access to resources that support the economic base of the region.

Mineral exploration, timber harvesting, guide outfitting, trapping and range activities are licensed and actively occurring in the study area. Public recreation, including hunting, fishing and numerous other outdoor recreation activities, is also widespread across the landscape and is considered a major Quality of Life factor by residents. Tourism is an important user of the land base, particularly in relation to protected areas such as Wells Gray Provincial Park.

## Tourism

Tourism represents a significant component of the regional economy and will provide a solid base for a Geopark. The corridor is already well recognized in a number of national and international markets for its iconic landscapes associated with Mt. Robson and Wells Gray Provincial Parks, its nature-based visitor experiences, its pastoral setting and small rural communities, and its cross-section of quality winter product and destinations. It is a natural travel route for visitors travelling either east-west or north- south, and is particularly appealing to European travellers.

In recognition of these destination corridor attributes and the value in promoting the entire corridor as a 'destination route', a collaborative approach to marketing has already emerged with the North Thompson communities working together in an alliance (<http://norththompson.ca/>) and the Robson Valley Tourism Association likewise working as a partnership. Both collaboratives offer a marketing structure that can be used to tell the Geopark 'story' in the initial phase of pursuing designation.

With the tourism infrastructure that is in place, the services and products that already exist, and the collaborative marketing, the project area is well positioned to begin acting as an integrated geotourism destination. Any application that is made to the GGN has to show that this is indeed the case and that the aspiring Global Geopark is already acting as such.

## 4. The Geological Heritage and the Identification of Geosites

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### Geological heritage<sup>36</sup>

(By Dr. Cathie Hickson)

The proposed area captures some of the most spectacular of all the geological events that gave rise to the North American continent. It is thematically tied together by its geology and the resultant climate and landforms that these geological forces created.

The valleys echo from a time when the Earth's crust was being deformed and folded, breaking apart along major zones of weakness called faults. The river cuts through these weak rocks that range in age from 2 billion year old fragments of the ancient North American continent to a patchwork quilt of ancient offshore islands, some created by volcanoes spewing lava and ash. These islands and the seas between them were forced together over hundreds of millions of years creating a kaleidoscope of rock types that finalized its shape about 100 million years ago forming a whole new piece of British Columbia.

As climate cooled and warmed over the last 2 million years, glaciers came and went. Each time they covered the landscape, the ice filled with rock debris cut deep into the rock already weakened by faults to create the river valleys of today. Many vestiges of the last glaciation can be seen along the North Thompson. Thick banks of silt and sand are testament to times when the valley was blocked by glaciers creating massive lakes upstream. When these ice dams failed catastrophically, the resulting floods carved and scoured the valley bottoms leaving giant boulders and gravel behind. The town of Clearwater is built on one of the sandy remnants of these glacial lakes and many of the parks along the corridor preserve glacial features that are from this time.

Ice and faults created steep valleys and rugged terrain. The glaciers that cap many mountains along the North Thompson are vestiges of a time when over two kilometres of ice covered all but the highest peaks. Spectacular waterfalls, such as the Swiftcurrent waterfall in Mount Robson Provincial Park to the iconic Helmcken Falls in Wells Gray Provincial Park, abound in the region as the rivers descend from their headwaters to the valleys below.

The glaciers have also left another indelible mark on the landscape. Fiery eruptions from volcanoes over the past two million years have fought a battle with cocooning glacial ice. The eruptions into ice or cold waters have created unusual types of volcanoes. The flat-topped and steep-sided volcanoes developed underneath the glacial shroud are called tuyas. Even after the ice disappeared, magma has continued to force its way to the surface in post-glacial times. The cinder cones dotting the landscape of Wells Gray at less than 10,000 years old are continuing testament to the fiery magma that has emerged from the depths below our feet over the past two million years.

These geological and climatological forces have created an amazing array of features to be opened and investigated like treasure – it is our world, the world we live in, the world we can explore and wonder at.

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<sup>36</sup> The following overview on the geological heritage and themes was written by Dr. Cathie Hickson of Tuya Terra Geo Corp for this report. Tuya Terra Geo Corp has also commenced work on geosite notations.

## Identifying themes

The process of creating a cohesive unit under the label of a Geopark will require identifying themes that can tie the various aspects, stories and visitor experiences together. The following represents a preliminary step in this direction.

The region is thematically tied together by its geology and the resultant climate and landforms that these geological forces create.

- **Falls** – waterfalls such as those in Wells Gray Provincial Park, but also along the corridor and many tributary streams and rivers.
- **Floods** – glaciers dammed the North Thompson as well as tributary valleys during the waning stages of the last ice age. Failure of the dams created massive flooding that carved the “modern” valleys.
- **Fire** – volcanism in the Wells Gray area started about two million years ago continuing to the present. The youngest cinder cone is likely Kotal cone.
- **Faults** – the underlying forces which created the spectacular valleys and uplifted the mountains. The path of the North Thompson is strongly controlled by faulting, as is the Rocky Mountain Trench.

There is the potential to identify and ‘unpack’ these themes through interpretation and visitor experiences at a series of geosites throughout the area. In addition, the cultural and ecological landscapes that have been shaped by the area’s geomorphology add a further dimension to the Geopark story, including how human economic activity continues to leverage the geological heritage. Everything from renewable energies or the development of extractive resources to the use of the landscape in the arts represents the broader story and offers the potential for the development of new visitor experiences. The task ahead requires identifying the geosites that are accessible to the public and can form the basis of the application.

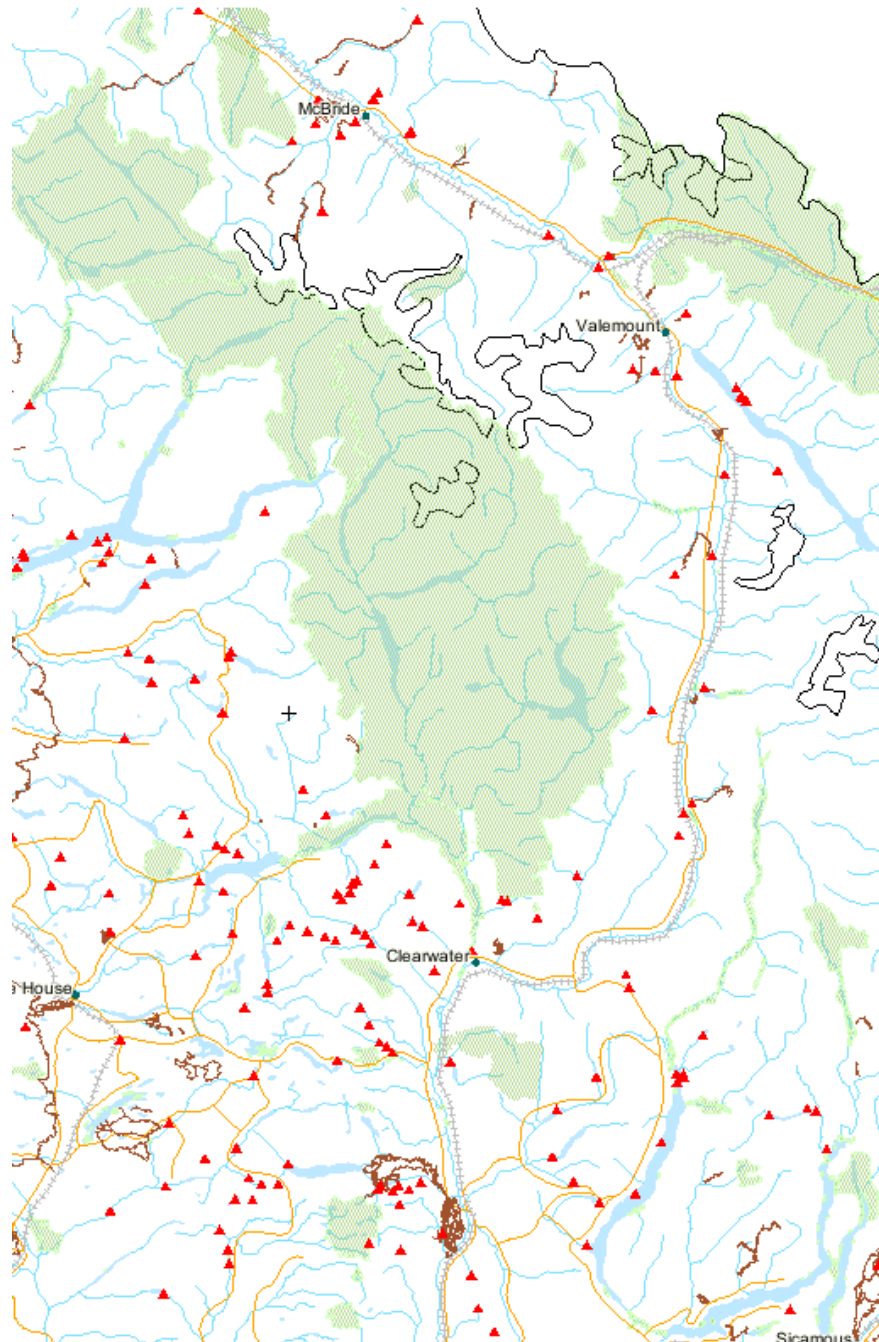
## Identification of geosites

Preliminary work on identifying geosites has focused on the existing 85 protected areas within the proposed boundary, consisting of 28 provincial parks, 54 recreation sites, and three regional parks. The provincial parks are established under the Parks Act and are managed by BC Parks. The recreation sites are established under Section 56 of the Forest and Range Practices Act and managed by the Ministry of Forests, Lands and Natural Resource Operations (FLNRO). The regional parks are established under local bylaw and managed by local government. Geological and geomorphological notations have been prepared for several of these sites, together with descriptions of ecological and historical significance. The core of the Geopark is expected to focus on Wells Gray Provincial Park, with other geosites contributing to the thematic presentation of the corridor, including Mount Robson Provincial Park – part of the UNESCO Canadian Rocky Mountains World Heritage Site. This ‘layering’ of designations is an additional bonus to the Geopark.

To the north, it is anticipated that the Geopark will also include the Antique Temperate Rainforest in the Robson Valley – an area that is currently under consideration for provincial park designation. This Rainforest is part of the BC inland temperate rainforest, the only temperate rainforest growing 400-600 kilometres inland and the only rainforest in the world to derive a major portion of its

moisture from snow. This biologically unique region was created as a result of a series of high, rugged, parallel north-south mountain ranges running from northern BC to the US border.

Further field work is required to create the list of geosites that will form a key part of the application submission. Identifying the list will involve an assessment of each site's significance in relation to the Geopark themes, and an evaluation of the site's capacity to contribute to a quality visitor experience, with consideration being given to accessibility, potential for interpretation, and existing visitor facilities and related visitor services. The process will require a combination of scientific research and community input.



BC Parks and FLNRO Recreation sites within the proposed Geopark area

## 5. The Impact of Designation

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### Assessment of Economic Impacts

One of the main anticipated benefits of achieving Geopark status would be the increased tourism activity that would accrue to the region due to an enhanced market profile and availability of themed activities or experiences. The added benefits would derive from increased visitor volumes and spending, which would in turn lead to more business activity, employment and employment income.

An understanding of these economic benefits is important because it will inform decision making for government, industry and communities as they consider supporting the initiative. Specifically, the quantification of benefits when compared to costs would provide benchmarks for organizations that are considering allocating resources for the establishment and operation of the Geopark.

### Current Visitation

The number of visitors to British Columbia and the Thompson Okanagan tourism region are tracked or estimated on a regular basis, but such is not the case for the North Thompson Valley. Indirect methods and secondary data sources must be used to build a picture of the tourism industry in the region and how it might change if the Geopark initiative were to proceed.

In 2012, there were 13.6 million overnight domestic visitors and 4.3 million overnight international visitors to British Columbia. The related visitor spending was \$8.3 billion. Fifty-eight percent of total overnight visits were by BC residents, while two-thirds of international overnight visitors and 16% of total overnight visitors were from the US. While overall visitation has tracked positively over the last three years, it is interesting to note that overnight international visitors are less today than they were in 2002 for all major markets, including US, Europe and Asia/Pacific<sup>37</sup>.

In 2010 (the last year of available data), the estimated number of visitors to the Thompson Okanagan represented 19% of provincial overnight visitation and 14% of related spending. This amounted to 3.3 million overnight person-visits and \$1.1 billion in related spending. Domestic overnight travellers accounted for 85% of visitation and 80% of related spending. International travellers accounted for 15% and 20%, respectively<sup>38</sup>.

Statistics Canada surveys and other data sources that are used to characterize the BC and Thompson Okanagan tourism markets are not available for the North Thompson Valley. Key secondary sources such as Visitor Centre attendance and room revenues collected by BC Stats are unable to provide sufficient representation of the overall market. In the absence of primary research (which is outside the scope of this study), and in lieu of any better alternatives, highway traffic volumes are the best remaining option for estimating visitor volumes in the Valley.

The Ministry of Transportation and Infrastructure (MOTI) does not maintain any permanent count stations in the North Thompson Valley, but it does undertake periodic and short counts at four Highway 5 locations in the study area (Heffley Creek, Little Fort, Avola and Valemount). The annual

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<sup>37</sup> Destination BC, 2014, *The Value of Tourism in British Columbia. Trends from 2002 to 2012*

<sup>38</sup> Destination BC, 2013, *Regional Tourism Profile Thompson Okanagan*

average daily traffic for these sites between 2005 and 2013 was 3,183 vehicles, while the summer average daily traffic was 5,469, for a difference of 2,286 vehicles. This difference is used as a surrogate for visitor travel, although it is recognized that a number of factors such as the proportion of commercial traffic, winter destination travel (notably to McBride, Valemount, Blue River and Sun Peaks) and gaps in the short counts for certain years are not explicitly modelled and may therefore bias this estimate up or down.

Room revenue data for the region indicates a spring-summer tourism season of June to September, a total of 122 days<sup>39</sup>. The incremental traffic volume during this season together with a passenger total of two persons per vehicle would yield a visitor volume of approximately 560,000 annually. This is equivalent to 17% of total Thompson Okanagan region visitation in 2010.

It is possible to estimate visitor expenditures, again using Thompson Okanagan visitor spending coefficients as a guide. In 2010, 41% of all visits to the Thompson Okanagan were day use only, the remaining 59% being overnight<sup>40</sup>. Average daily spending of \$100, an average length of stay of two days, and day use spending of \$19 per day, yields total visitor spending of approximately \$70 million annually.

In order to test the robustness of the traffic-derived visitor volume estimate, room revenues reported as part of the Municipal and Regional District Tax for the 2010 to 2012 period were reviewed. These are presented in Table 1 for the Valemount, Clearwater and Sun Peaks areas. Data gaps for Clearwater for 2010 and 2011 (prior to the implementation of the tax) do not allow a valley-wide trend to be shown, however 2012 estimated room revenues of \$20.3 million is considered representative. Some caveats must be considered when inferring leisure travel and spending from this data. First, room revenue data is only that collected through the Municipal and Regional District Tax and would not capture all properties or communities. Although the 37 properties included in the data set make up the large majority in the North Thompson Valley, the room revenue total should still be considered a conservative estimate as it does not capture accommodation with less than four rooms (such as B&Bs), nor does it capture room revenue from Barriere and TNRD Area O, nor Blue River and Area B. Second, some Valemount room revenues should be considered extraneous to North Thompson Valley visitation, although there is no practical way to make a confident apportionment. And third, some room revenues are attributable to business travel that has little or no causal link with leisure travel. In 2010, 34% of total Thompson Okanagan expenditures were made by business travellers. In the North Thompson Valley, work crews associated with resource exploration, development and construction are an important source of revenues for accommodation properties. When these three factors are considered, the estimated share of room revenues attributable to leisure travellers is between \$14 and \$17 million, annually.

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<sup>39</sup> BC Stats. 2014. *Room Revenues in Selected Areas, by Community Municipal and Regional District Tax (MRDT) Room revenues in \$000, Annual*. Available at: <http://www.bcstats.gov.bc.ca/Files/c071216f-989d-42ea-9a8c-f68e885274ec/TourismRoomRevenue1303.xlsx> Accessed: November, 2014

<sup>40</sup> Destination BC, 2014, Ibid

**Table 1 Room Revenues in North Thompson Valley Communities, Municipal and Regional District Tax, \$000**

Area	2010	2011	2012
<b>Sun Peaks Mountain Resort Area</b>	10,641	10,111	10,414
<b>Valemount</b>	5,194	5,791	6,421
<b>Clearwater &amp; area</b>	n/a	n/a	3,510
<b>North Thompson Valley Total</b>	15,835	15,902	20,345
<b>Estimated Leisure Share of NTV Room Revenues</b>		\$14,000 - \$17,000	

Source: BC Stats (2014)  
 Note: n/a data not available

Previous visitor surveys have consistently shown accommodation expenditures as being in the range of 20% of total visitor expenditures. Destination BC estimated Accommodation Services GDP in BC, as a total of all tourism GDP, at 18% in 2012<sup>41</sup>. A 20% apportionment of the estimated \$70 million in total expenditures leads to an inferred accommodation market of \$14 million, which is comparable with room revenue estimates provided in Table 1.

### Geopark Case Visitation

In order to measure the tourism benefits attributable to a potential Geopark in the North Thompson Valley, it is necessary to estimate the additional trips and spending that visitors would make specifically because of the existence of the park. Normally this would be done by projecting visitation for two cases, the base case, which is the future in the absence of the potential Geopark, and the Geopark case, which is the future with the Geopark implemented and developed as planned. Due to the uncertainties related to the baseline as defined in the previous section (i.e. the estimate of a \$70 million tourism market in the Valley), the additionality attributed to the Geopark case will be estimated as an increment to the base case. This means that whatever growth would have occurred in the base case also applies to the Geopark case, and that any additional impacts or benefits are solely due to the existence of the Geopark. This limits the assessment to quantification of incremental impacts only and not to total impacts.

### Evidence in the Literature

Such an approach is only feasible if there is research available that shows how and why visitation increases in a Geopark when compared to its preceding tourism setting. Fortunately, studies have been conducted on established Geoparks that provide some insights into the variables affecting visitation levels and impacts. Europe is well represented in the research, North America less so because of the virtual lack of Geoparks and a lower tendency to monitor, evaluate and report on the effects of the designation.

<sup>41</sup> Destination BC, 2014, Ibid

A prominent study of two Geoparks (English Riviera and Shetland) in the United Kingdom found that annual attendance was positively affected by brand awareness among visitors as determined through exit surveys. It was also possible to attribute a portion of visitor numbers to Geopark status based on the percentage of visitors who were aware the area was a Geopark. For example, 25% of the 2.1 million visitors to the English Riviera Geopark in 2012 were aware of the resort's Geopark designation, while for Shetland Geopark it was 11%<sup>42</sup>.

A study of the Galloway and South Ayrshire Biosphere Reserve inferred an incremental visitor impact of 6.6% (pessimistic), 13.3% (base) and 20% (optimistic)<sup>43</sup>.

Studies of World Heritage Sites (WHS) inscribed by UNESCO show anywhere from 0% to 10% incremental visitation depending on the nature and location of the site, existing visitation, and expected changes in facility development and marketing<sup>44</sup>. It is recognized that WHS sites are different than Geoparks as they tend to be much more oriented toward cultural protection, but research on both show similar influences on visitation due to brand recognition and in some cases loyalty to the UNESCO affiliation. A closer affiliation between UNESCO and the Global Geoparks Network would be expected to further induce incremental visitation and the associated beneficial effects. Even organizations which are already world-renowned have stated that affiliation is still important to reinforce their reputation as a place or institution of international significance. In relation to World Heritage Sites, this can be called a 'celebration' designation<sup>45</sup>.

Global Geopark and WHS site operations also share some defining characteristics that are directly linked to incremental visitation. These include:

- Flagship projects that highlight the character of the region are more likely to lead to success<sup>46</sup>.
- The more homogeneous and defined the Geopark concept, including clearly established boundaries and gateways, the more likely an economic evaluation framework will prove effective<sup>47</sup>.
- Well defined strategies of local product development, geobranding of establishments and services, and inclusive consultation with regional and local governments, businesses and

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<sup>42</sup> United Kingdom National Commission for UNESCO (UKNC for UNESCO). 2013. *Wider value of UNESCO to the UK 2012-13*.

<sup>43</sup> Mackay Consultants and RSK ERA. 2008. *The Socio-economic Potential of the Galloway and South Ayrshire Biosphere Reserve*. Prepared for Dumfries And Galloway Council, East Ayrshire Council, South Ayrshire Council, Scottish Natural Heritage Forestry Commission.

<sup>44</sup> Kayahan, Burc. 2010. *Assessing the economic impact of a UNESCO World Heritage designation*. Acadia University, Wolfville, Nova Scotia. Galvin D. 1997. *Testimony on H.R. 901, The American Land Sovereignty Protection Act, to US 105th Congress House of Representatives Committee on Resources*. Washington, DC.

Van der Aa, B. 2005. *Preserving the heritage of humanity? Obtaining world heritage status and the impacts of listing*. PhD Dissertation, University of Groningen.

Econsearch. 2012. *Economic Impact Projections for UNESCO World Heritage Site listing of the Mount Lofty Ranges Agrarian Landscape*. The Mount Lofty Ranges Working Group. Marryatville, South Australia, Australia.

Rebanks Consulting Ltd and Trends Business Research Ltd. 2009. *The Economic Gain: Research and Analysis of the Socio Economic Impact Potential of UNESCO World Heritage Site Status*.

<sup>45</sup> UKNC for UNESCO, 2013, Ibid.

<sup>46</sup> Mackay Consultants and RSK ERA, 2008, Ibid.

<sup>47</sup> Hartling, Joachim W. and Irene Meier. 2010. *Economic Effects of Geotourism in Geopark TERRA.vita, Northern Germany*. Geoparks, Vol. 27, No. 1 (2010).

organizations will build public awareness and support for the Geopark designation and strengthen tourism impacts<sup>48</sup>.

### ***Estimate of Incremental Visitation***

The research indicates that incremental visitation would be based on the existing economic geography of the site (e.g. large population and market expansion potential versus small, rural population with little potential for growth)<sup>49</sup>. The study area is rural with a small population but it also has good expansion potential because of its access to developed and emerging visitor markets.

Based on the literature review, and in consideration of the North Thompson Valley's existing visitor markets, products, location, and proximity to the Rocky Mountains UNESCO sites, a 2% gain in visitation relative to the base case was considered appropriate for the Geopark. A 4% gain was also modelled to account for the potential for rebranding and marketing programs amongst all communities in the corridor.

This latter aspect of community involvement in Geopark development and marketing is an important one. UNESCO has acknowledged that many of the economic outcomes provide only 'supplementary income' for the local population, as opposed to full time jobs<sup>50</sup>. This is partly due to a lack of planning and commitment to tourism and economic development objectives. **The tourism benefits of Geopark designation depend on how effectively the individual Geopark uses the brand as a promotional tool**<sup>51</sup>. In terms of broader economic development impacts, numerous case studies have shown a general lack of local knowledge about how Geoparks function and the impacts they deliver<sup>52</sup>. By focusing Geopark programming on advancing broader economic development aspirations, it is possible to raise community awareness of the Geopark as a development tool, which has the effect of stimulating tourism as well as other wealth-creating activities.

Gains in visitation are not anticipated to be fully realized in the first year after designation, but would be laddered as awareness builds and marketing campaigns are developed. In Year 1, 25% of the increment is realized, climbing to 50% in Year 2, 75% in Year 3 and 90% in Year 4. **Year 5 would be the first year of full incremental growth.**

Other impacts that might be expected to occur as a result of the designation, such as an increase in higher spending international visitors and longer stays by non-incremental visitors, were not included in this assessment due to the absence of any conclusive research. As these effects would be beneficial, their exclusion means the following impact estimates may be considered conservative.

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<sup>48</sup> Boys, Brandon. 2012. *Sustainable Economic Development: Issue Framing and Opportunities for the Hondsrug Geopark*. University of Groningen.

<sup>49</sup> Hambrey Consulting. 2007. *Social, economic and environmental benefits of World Heritage Sites, Biosphere Reserves, and Geoparks*. Scottish Natural Heritage Commissioned Report No.248 (ROAME No. F06NC05).

<sup>50</sup> Global Geoparks Network. 24 September 2010. *Global Network of National Geoparks – GGN Frequently Asked Questions around the Global Geoparks*.

<sup>51</sup> UKNC for UNESCO, 2013, Ibid.

<sup>52</sup> Boys, Brandon. 2012, Ibid.

The projected incremental visitor demand for each of the three scenarios is presented in Table 2 for the first five years of designation. Base Case visitation is expected to grow at 1% per annum, which would indicate close to 586,000 visitors in Year 5. The number of visitor days, as determined by the length of stay coefficients provided in the previous section, would be 932,000.

The Status Quo Scenario generates no effects, even though designation is obtained. Research indicates that designated sites would not be expected to net tourism benefits unless they took advantage of the brand recognition through marketing programs.

The Moderate Scenario generates an additional 4,647 visitor days in Year 1 and 19,344 by Year 5. For the Aggressive Scenario, the impacts on visitation are doubled to 9,294 visitor days in Year 1 and 38,687 in Year 5.

**Table 2 Projected Incremental Visitation to North Thompson-Robson Valley Geopark**

	Year 1	Year 2	Year 3	Year 4	Year 5
Base Case visitors	563,300	568,933	574,623	580,369	586,172
Base Case visitor days	929,445	938,740	948,127	957,609	967,185
Incremental visitor days					
Passive Scenario	-	-	-	-	-
Moderate Scenario	4,647	9,387	14,222	17,237	19,344
Aggressive Scenario	9,294	18,775	28,444	34,474	38,687

### *Assessment of Visitor Impacts*

The incremental visitation estimated above will affect visitor spending and the tourism industry. The impacts on gross domestic product (GDP), employment and government revenue from taxes are presented in Table 3. All estimates utilized the BC Input-Output Model multipliers and thus represent impacts to the province, although it is believed that a significant proportion would accrue to the North Thompson-Robson Valleys.

**Table 3 Projected Economic Impacts of Visitation to NTV Geopark**

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Moderate Scenario</b>					
Visitor spending	\$333,051	\$672,764	\$1,019,237	\$1,235,315	\$1,386,298
GDP	\$231,201	\$467,027	\$707,545	\$857,545	\$962,356
Employment (jobs)	6	12	19	23	25
Govt. Revenue	\$42,193	\$85,229	\$129,122	\$156,496	\$175,623
<b>Aggressive Scenario</b>					
Visitor spending	\$666,103	\$1,345,527	\$2,038,474	\$2,470,630	\$2,772,596
GDP	\$462,403	\$934,053	\$1,415,090	\$1,715,090	\$1,924,712
Employment (jobs)	12	25	37	45	51
Govt. revenue	\$84,385	\$170,458	\$258,244	\$312,992	\$351,247

In the Moderate Scenario, incremental visitor spending is estimated to be \$333,000 in Year 1, rising to \$1.38 million by Year 5. For the Aggressive Scenario, visitor spending doubles to \$666,000 in Year 1 and \$2.7 million by Year 5. Although only the first five years of incremental visitation are shown, the impacts are assumed to continue in perpetuity.

By Year 5, total impacts in the Moderate Scenario would amount to \$231,000 in GDP, six person-years of employment and \$42,000 in tax revenues for all levels of government. All impacts would effectively double under the Aggressive Scenario. As noted above, the impacts would be received by the province, with a proportional share accruing to the North Thompson-Robson Valleys.

These impacts may be manifested in different ways within communities. There could be new businesses established, but the more likely pathway for increased visitor expenditures is the increased utilization (or expansion) of existing business capacity. For example, the Hondsrug Geopark in Holland focused almost exclusively on developing 'anchor points' or staging areas of existing businesses, museums or educational centres<sup>53</sup>.

## Other Potential Economic Impacts

As discussed in Section 2, there would be other potential beneficial impacts to the Geopark designation, although evidence in the research is anecdotal and based on personal observation rather than supported by empirical study.

1. **Enhanced leverage to access funding for community purposes:** It is well documented among World Heritage Sites, Biosphere Reserves and Global Geoparks that each of these designations improves the ability of local communities to raise funds from senior levels of government, non-government organizations and the private sector. The main benefits do not appear to derive from the establishment and operation of the Geopark itself (as budgets for most of these are relatively minor), but community initiatives and projects that although separate from the designated areas still associate themselves with UNESCO branding.
2. **Stimulus to awareness raising and educational initiatives:** The enhanced value of the region resulting from the Geopark designation would almost certainly stimulate further exploration, study and research of geology and the history of the landscape. This would be linked to local educational institutions such as Thompson Rivers University, which currently has field facilities in Wells Gray Provincial Park, and the University of Northern BC, in addition to other provincial, national and international academic institutions and scientific experts with a research interest in the area. By way of comparison, an important secondary market segment for the Burgess Shale in Yoho National Park is the education sector, comprising students, teachers, academics and other educators with an interest in the learning and scientific aspects of the shale. These markets are international in scope.
3. **Enhanced economic development other than tourism:** In some Geoparks economic impacts extend beyond tourism, and include the explicit recruitment of new businesses and new residents into communities in or near the park. It is not clear from the research how business attraction might be influenced by the Geopark because many key location factors (e.g. access to

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<sup>53</sup> Boys, Brandon. 2012, Ibid

infrastructure, local labour market, access to raw resources) that might appeal to new businesses are unrelated. However, quality of life factors, including an enhanced sense of place that make the region a more desirable place to live and work are related<sup>54</sup>. In a 2011 study, twenty-five Geoparks were surveyed to determine the strategies they employ to improve the local economy. The findings showed 'geothemed' or branded business activities and products in addition to jobs created as a result of tourism, conservation efforts and educational programs.

4. **Advancement of sustainable development concepts:** Geoparks could also support sustainable economic development through production of renewable energy, advancement of high-efficiency buildings and innovative municipal practices that contribute to sustainability objectives.
5. **Social cohesion and community capacity:** The benefits associated with social cohesion and community capacity appear to be greatest where there is a strong sense of ownership of the land and resource base<sup>55</sup>. The study area is mainly Crown land with unimpeded public access rights and residents already enjoy its use in support of numerous recreation activities, including hunting, gathering, fishing and nature observation. The management of the land base is the responsibility of the provincial government, but local input was solicited in the preparation of land use plans and continues to be considered in management practices. As the Global Geopark would not change current land management practices, the benefits in terms of new community capacity would be muted.

## Implications for Land Use

As noted earlier, one of the perceived drawbacks or risks associated with Geopark designation is that it may somehow affect, influence or in some way over-rule existing land and resource management regimes, or displace activities on the land. Such is not the case, nor is there any evidence in the literature that this could happen. None of the UNESCO designations confer increased statutory environmental protection, a fact made clear throughout the nomination process. *Geoparks are not a legislative designation though the key heritage sites within a Geopark should be protected under local, regional or national legislation as appropriate*<sup>56</sup>.

**A Geopark under the Global Geoparks Network is not a new category of protected area or landscape. It is not a new form of land ownership or federal or provincial designation of Crown land.** A Geopark is therefore much different to the existing 'park landscape' in BC which largely consists of protected National or Provincial Park lands as defined in statute.

Qualifying Geoparks are those that maintain public access and have an existing strong partnership among neighbouring land owners and managers, or the potential to build a strong partnership. Concurrence of all property owners is required through signatures in the planning process. The designation of the land area as a Geopark does not affect the legal status of a property.

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<sup>54</sup> Farsani, N., Coelho, C. & Costa, C., 2011, Ibid

<sup>55</sup> Hambrey Consulting. 2007, *Social, economic and environmental benefits of World Heritage Sites, Biosphere Reserves, and Geoparks*. Scottish Natural Heritage Commissioned Report No.248 (ROAME No. F06NC05).

<sup>56</sup> United Nations Education, Scientific and Cultural Organization. 2015. *What is the Global Geoparks Network?* Available at: <http://www.unesco.org/new/en/natural-sciences/environment/earth-sciences/global-geoparks/some-questions-about-geoparks/what-is-a-global-geopark/> Accessed: January 2015

Importantly, **the Geopark would not lead to the foreclosure of existing or future crown tenures or resource activities that would be expected to occur under base case conditions.** This applies to key industries such as forestry, mineral exploration and mining. In fact, mining continues in many Geoparks and can be an integral component in interpreting geological history. Anthracite coal is still mined at Germany's TERRA.vita Geopark. To explain the geological history and the utilization of these resources to the public, old mining buildings, shafts and quarries are used as exhibits<sup>57</sup>.

The sole role of UNESCO is oversight of the global program criteria and quality standards. UNESCO has no legal rights over local, provincial, federal or private ownership or management of a Geopark area and there is no international convention bound to the Geopark<sup>58</sup>.

However, designation does confer some leverage for protecting high value sites but this only exists in relation to the possibility of de-listing<sup>59</sup>. To date, no Geoparks have delisted from the global network.

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<sup>57</sup> Hartling, Joachim W. and Irene Meier. 2010, Ibid

<sup>58</sup> Global Geoparks Network, 2010, Ibid.

<sup>59</sup> Hambrey Consulting, 2007, Ibid

## 6. Moving Forward

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### Decision-making criteria and recommendation

The following criteria have been used in making a recommendation to move forward:

Criteria	Yes
The area has geological heritage that is internationally significant	✓
The designation will generate a positive economic impact in general	✓
The designation will strengthen the tourism industry	✓
The designation is aligned with the planning framework	✓
The designation would not lead to the foreclosure of existing or future crown tenures or resource activities that would be expected to occur under base case conditions	✓
The communities are aware of the project and have indicated an initial level of support	✓
Geosites are readily accessible	✓
Site management policies are already in place	✓

On the basis of meeting these criteria, **this report recommends moving to the next stage and working on the development of the documentation required for the submission of an application.**

To facilitate this, it is further recommended that:

- a) The Steering Committee representatives from all political jurisdictions bring the matter to their respective Councils and Boards and request a resolution to support the application process. All Councils and Boards will need to support the initiative in principle to maintain the proposed geographic scope.

### Implications and areas of consideration

#### Management structure

In order to proceed with an application, it will be necessary to designate an applicant and vest it with the necessary financial and management authority to proceed on behalf of its constituents. Given the geographic size of the proposed Geopark, multiple stakeholders will need to be involved in the application process and subsequently in the operation of the Geopark. As noted in Chapter 2 of this report, the management structure needs to reflect grassroots support from communities, educational institutions, government and the tourism industry. In the example of the English Riviera Global Geopark nine existing organizations, led by Torbay Council, joined a consortium with each being designated to lead a different aspect of development, including site management, marketing, research, interpretive and visitor services, and the like. Similarly, in Tumbler Ridge, the application process was led by Steering Committee with representation by the District, the local museum and arts councils, Northern BC Tourism, Teck Resources, the school district, local business and outdoor recreation groups.

Recommendations for proceeding with a management structure are as follows:

1. Determine the legal structure, either a society or committee, and the members of such. There must be representation from provincial ministries (including BC Parks, FLNRO, and JTST<sup>60</sup>), local and First Nation governments, business groups, the tourism industry, Thompson Okanagan Tourism Association, resource industries and educational institutions.
2. Identify and recruit one or two champions who will be responsible for marshalling stakeholder support, promoting community awareness and understanding of the initiative and generally leading the application forward. While successful applications clearly demonstrate a bottom-up approach it is equally important to designate a leader and “evangelist” who can keep stakeholders informed and motivated to support the application.
3. Define the terms of reference, budget and funding leading up to and including the adjudication of the application.
4. As in the English Riviera Global Geopark, form a set of working groups with each being responsible for different elements of the application. Minimum requirements would be geosite identification and research, marketing, destination and product development, and education and community outreach.

## Operational costs and funding implications

In moving forward, there will be cost implications for both the application phase and operations beyond successful designation. The application phase will involve the following activities and related costs:

- Scientific research and preparation of the list of geosites, including mapping and GIS;
- Community engagement, including field site visits and consultations on proposed geosites;
- The development of online and offline themed collateral for the corridor;
- Advisory, mentorship and coordination services to enhance existing geotourism activities;
- The completion of the application submission;
- The development of the business/management plan for the Geopark;
- Site evaluation by representatives of the Canadian National Committee for Geoparks (travel and hosting costs); and,
- Site evaluation by representatives of the Global Geopark Network (travel and hosting costs).

It is anticipated that the costs of the application phase will be approximately \$80,000 to \$90,000. It may be possible to meet these costs through a range of initiatives including the application of Community Tourism Opportunities (CTO) and Community Tourism Foundations (CTF) funds and programming<sup>61</sup>. However, there will be a need for a strong champion to mentor existing businesses

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<sup>60</sup> Ministry of Jobs, Tourism and Skills Training

<sup>61</sup> The Destination BC Community Tourism Foundations (CTO) program could be utilized to support the development of new marketing initiatives, while the work associated with the development of the management and business plan may be supported by the Community Tourism Foundations program, providing that there is a collaborative approach involving the entire corridor from Barriere to McBride.

and ensure a coordinated effort to the initial development of a regional and themed approach to geotourism. Consideration should be given to exploring opportunities for the secondment of an existing regional JTST staff person for this catalytic role on a temporary basis.

Following successful designation, in addition to regular site management and scientific research, operations of the Geopark will involve the following:

- Branding of the Geopark;
- Overall coordination of the marketing activities;
- Overall coordination of educational and geotourism activities, including the development of a quality assurance program for participating businesses;
- Overall coordination of the activities of the working groups and new management structure;
- The development and implementation of a signage and waymarking plan;
- The development and implementation of an interpretive plan;
- The publication of branded Geopark collateral;
- Attendance at Canadian National Committee for Geoparks and GGN meetings and conferences, including the Global Geopark Conference that is held every two years; and,
- Fundraising activities through grant applications, corporate sponsorship and membership services.

To be effective at leveraging the Geopark designation, it is recommended that at least one full-time-equivalent is employed to oversee the fore mentioned activities. In the initial start-up phase, other costs are likely to be on a project-by-project basis and can be supported as funds become available.

Based on the first five years of Stonehammer Global Geopark, the indicative operational costs could be in the order of \$197,000 per annum, although the proposed Geopark would likely be less given its smaller tourism base and less complex local context. Potential sources of revenue include:

- Governmental and non-governmental granting agencies and foundations such as:
  - Western Economic Diversification
  - Southern Interior Development Initiative Trust
  - Northern Development Initiative Trust
  - Columbia Basin Trust
  - Canadian Geological Foundation
  - Geoscience BC
- Local government partners;
- Corporate sponsors;
- Pooled revenues based on an agreed funding formula from the 2% Municipal and Regional District Tax; and,
- Geopark business and resident partners.

Recommendations for dealing with funding implications are as follows:

1. Task the appointed champion(s) working group or seconded staff person with identifying and pursuing funding options.
2. Establish a Memorandum of Understanding (MOU) between the local governments that identifies funding contributions for the application phase and a minimum of three years of the operational phase.
3. Develop a deeper understanding of the project and the benefits of designation within the Provincial Government.
4. Identify relevant in-kind contributions from all partners in the new management structure.
5. As funds from the North Thompson Marketing Alliance are likely to be directed to the marketing of this initiative and these are primarily derived from the 2% Municipal and Regional District Tax on accommodation, it is recommended that the areas not currently charging this tax move forward with its implementation. This will include the Blue River area (TNRD Electoral District B) and the McBride area (Regional District Fraser-Fort George – Electoral Area H).

## Scientific research

While the geological and geomorphological assets of the North Thompson and Robson valleys are compelling, they have not been the subject of significant investigative research for some time and an inventory of high-value geosites is incomplete. It will therefore be necessary to conduct field research to at least catalogue geosites and determine their significance and relevance to the proposed Geopark's interpretive themes.

Recommendations for proceeding with a research program are as follows:

1. Launch a 2015 summer research program that will highlight research potential and identify geosites. The purpose of this field season would be to catalogue core sites to be profiled in the application. A sample of geosites to support the four themes would be a priority. Mapping and GIS coordinates would be documented where available and accessible sites noted.
  - a. A scope of work and details of desk information to be collected (photographs, trail information, geological reports/papers etc.) should be prepared. A ranking framework with criteria for prioritizing geosites is also required. The criteria would address significance or rarity (locally, regionally, globally), aesthetics, access, Crown land status, and tourism use potential.
  - b. Identify a university student who might be interested in doing a compilation of the research as part of their study program or an academic institution that can support desk and field research in the area.
  - c. Prepare an inventory of sites as the first step. This will be done using the database prepared as part of this report and notes submitted by stakeholders during the consultation phase. The student would not be making the final determination but would help prioritize sites based on the ranking framework.
  - d. Integrate the geosite inventory into the Thompson Okanagan Tourism Association (TOTA) inventory of stories, themes and features for the North Thompson Valley.

2. Investigate the feasibility of establishing a scientific panel that would assist with ongoing research while providing additional support for the application. Potential partners and participants include Thompson Rivers University, University of Northern BC, University of BC, Simon Fraser University, the BC Geological Survey, Geoscience BC and Geological Survey of Canada.
3. The first order of business for the Panel would be to prepare an ongoing research and education program, using best practices of other successful global Geoparks.

## Community engagement

A strategic approach to community engagement is essential for the successful designation of the Geopark and its ongoing operations. It will need to involve activities that:

- Raise the public's awareness, understanding and appreciation of the potential benefits of designation;
- Provide a forum to express concerns and resolve issues, including those relating to sensitive cultural and ecological sites that may not be suitable for public access;
- Identify cultural and economic development interests and potential opportunities, including leveraging initiatives such as the Regional Mountain Bike Tourism Project for the Corridor;
- Enhance capacity building; and,
- Create a program for mobilizing local stakeholders to work together in the selection of geosites and the sharing of local knowledge, and in developing a stronger community appreciation for the geological significance of the corridor. This should include local field trips for residents, particularly during the application phase.

The Gros Morne Co-operating Association provides an interesting model for a collaborative approach to community and economic development. In its role of supporting Parks Canada's mission to protect Gros Morne as a national park and UNESCO World Heritage Site, the not-for profit organization has pioneered a range of innovative initiatives that have contributed significantly to the economic sustainability of the region and have resulted in substantial investment in the communities and the strengthening of local culture and creativity<sup>62</sup>.

In the application and initial start-up phase the Geopark champion or coordinator will be required to play a key role in developing a community engagement process that will generate a strong sense of ownership for the project and commitment to its success. The community consultation that was undertaken for this feasibility study needs to be taken a stage further to embrace a wider audience. In particular, it is recommended that the consultation with First Nations is extended to have further dialogue not only with the Simpcw First Nation, but also with the Canim Lake Band and the Lheidli T'enneh First Nation.

Recommendations for these activities include:

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<sup>62</sup> The submission form completed by Gros Morne WHS to UNESCO as evidence of best management practice for the 2011 World Heritage Committee initiative on profiling global examples of best practice.

1. Develop a community engagement strategy and establish the community forums that will provide the basis for ongoing dialogue on all related issues and opportunities.
2. Build a strong relationship with the provincial and local media based on working closely with reporters to portray an accurate and comprehensive understanding of the Global Geopark concept and its relevance to the region and the province.
3. Develop and deliver a program of geosite visits (FAM tours) for local residents and tourism operators.

## The Geopark name

A key decision that will need to be reached during the application phase relates to the official name that will be given to the Global Geopark. While the project title has sought to refer to all elements of the corridor – Wells Gray Provincial Park, the North Thompson Valley and the Robson Valley – this should only be regarded as a working title. Developing the name will require putting political sensitivities aside and pursuing a name that will resonate in the marketplace, and will capture an element of the Geopark’s significance or character. The initial consultation process raised the suggestion of identifying a suitable name originating from the First Nations’ language groups, of which there are three in the proposed park boundary.

In moving forward, recommendations include:

1. Identifying a name with particular consideration for native words associated with related geological terms. This will not only raise the profile of the indigenous cultural element and its significance to the Geopark, but it will also circumvent issues associated with the current working title (including its weak market appeal, its inherent geographic complexity, and its lack of thematic content). Furthermore, the role of First Nations in this Geopark will be considerably more substantial than in the other two Canadian Geoparks – reflecting this in the name of the Geopark will strengthen the overall brand of the corridor.
2. Using the name and the key underlying themes to begin a preliminary process of branding the corridor. This process should not be pursued to its full conclusion until Geopark designation has been successful.

## Facilitating the development of geotourism

As noted in Chapter 5, the anticipated economic benefits of the proposed Geopark would only be realized with the implementation of an explicit tourism development program that elevated marketing effort and encouraged new destination and product development. Unlike UNESCO World Heritage Sites, where conservation and protection are high profile mandates of the charter, Global Geoparks are predominantly about expanding the awareness, understanding and appreciation of geology through geotourism. Furthermore, as Geoparks are more likely to embody multiple, non-contiguous sites, there is a greater need to connect themes and stories across the natural and cultural landscape rather than focusing programming on a single geographical unit, in the way that conventional parks do. Geotourism is not a new concept as it underlies almost every aspect of eco-tourism and nature-based tourism. However, in a Geopark direct associations are made to geology and geomorphology and the ways in which they profoundly affect the very nature

of human existence. In the North Thompson and Robson Valleys, this association must be more fully researched, interpreted, celebrated and of course promoted if tourism and economic benefits are to be realized.

There is already a sound tourism base in the region, as highlighted in Chapter 3 of this report. Robson Valley Tourism and the alliance of North Thompson communities have product and online presence that already exceeds that of many Global Geoparks. The corridor is promoted as a touring route and the North Thompson [website](#) site already features many of the region's geotourism assets.

Recommendations for incremental tourism development are as follows:

1. Develop a preliminary brand identity that can be strategically incorporated through co-branding into existing marketing programs by local destination marketing organizations (DMOs).
2. Use the TOTA inventory of geosites and other tourism themes, stories and features as a tool for facilitating the development of themed guided and self-guided tours. The development of geotourism tours and products prior to the application would significantly enhance the likelihood of acceptance.
3. Incorporate geotourism into Wells Gray World Heritage Committee activities.
4. Work towards developing an accreditation program to quality approved private sector tour operators. This is a good way to increase exposure for the brand and encourage Geopark-related product and services.

## The application process

The next phase of the work<sup>63</sup> involves completing the self-evaluation form and developing a Letter of Intent. The letter will formally initiate communication between the CNCG, UNESCO and the candidate site and helps coordinate the application process. While being referred to as the Letter of Intent, it does contain many of the key elements of the application including:

- Statement of interest
- Site photos
- Brief summary of the proposed Geopark area, with map
- Description of geosites within the proposed Geopark
- Plans for future Geopark management and marketing
- Plans for educational and interpretive programs
- List of management team and partners
- Indication of relevant land ownership and administration
- Application schedule and preparations
- Any additional relevant information

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<sup>63</sup> The following outline of the application process is taken from Canadian Federation of Earth Sciences, September 2010, *Guidelines & Criteria for Canadian sites seeking Geopark designation within the Global Geoparks Network*.

Assuming that the Letter of Intent meets with a positive review and the CNCG considers the applicant to be an appropriate candidate for Geopark designation, the CNCG will organize a site visit to be conducted by at least two of its members. This site visit will further assist with the application process and will provide feedback for the development of the final application documentation.

This application must conform to GGN requirements and will include:

**1. Map and site description:**

- a. Identification of proposed Geopark area and boundaries.
- b. Total proposed land area.
- c. Scientific description of all geologic sites within the proposed Geopark, including information documenting geologic significance, outstanding geologic features and processes, role in the regional ecosystem, historical information, and links to the area's history and economy.
- d. Summary of information on the area, including geography, economics, population, infrastructure, community information, cultural heritage, archaeology, natural landscape, ecology, flora, and fauna.

**2. Management structure:**

- a. Description of the management system for the Geopark as a whole, including names and affiliations of key officials.
- b. Detailed explanation of land ownership and management of each individual site within the proposed Geopark.
- c. List of partners and their proposed role in Geopark management, including those linked to the Geopark through:
  - Tourism
  - Concessions
  - Education and interpretation in schools, universities, or individual Geopark sites
  - Science and resource management at educational institutions, geological surveys, or Geopark sites
  - Curation and display of specimens in museums and/or Geopark visitor centres
  - Local/provincial/territorial/aboriginal governments
  - Non-profit organizations such as land trusts or cooperating associations
  - Public land management and authority
  - Volunteerism by individuals and organizations
  - Business activities
- d. Relevant individual site management plans
- e. Education plan
- f. Sources and commitment of funding
- g. Visitor facilities
- h. Monitoring plans

- i. Geopark partnership management plan
3. **Sustainable development strategy and goals for the proposed Geopark**
  - a. Geopark area marketing plan
  - b. Tourism plan
  - c. Outline of local community involvement
  - d. Long-term vision and desired goals/outcomes of the Geopark partnership
4. **Significance of the proposed Geopark** and justifications for its inclusion in the Global Geoparks Network.
5. **Signatures or written consent** that all relevant parties, partners, land owners, and land managers are in support of the area's application for Geopark status. If the area of a Geopark partly or wholly overlaps with an area already specially identified, such as a World Heritage Site, a Biosphere Reserve, a National, Provincial, Territorial or Municipal park, or aboriginal-administered lands, then clearance and approval must have been received from the parties with which the Geopark overlaps.
6. **Cover letter.**

At this stage the CNGC may select up to two Canadian Geopark applications for submission to the Global Geoparks Network each year<sup>64</sup>. After final approval by the Canadian Federation of Earth Sciences and the Canadian Commission for UNESCO, the documents are forwarded to the Global Geoparks Network with a letter of endorsement from CNGC. The decision making process will involve a desktop evaluation of the submitted documents and an independent site evaluation visit involving a team of two experts from the GGN.

Moving into phase 2 of this project will involve pursuing this application process as outlined.

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<sup>64</sup> As progress is made in establishing UNESCO Global Geoparks formally within the framework of the International Geosciences and Geoparks Programme (see the Stonehammer Declaration for further details – September 2014), the number of submissions forwarded to UNESCO and the GGN may be reduced to one at any given time.

## 7. Conclusion

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Geoparks are areas of geological heritage of international significance that can enhance and support sustainable economic development. The designation is based on voluntary membership with the Global Geopark Network, and does not override the existing planning structure and established land-uses. A Geopark in the North Thompson and Robson valleys would essentially be a virtual “park”, encompassing multiple discontinuous sites in a thematic series that provide public access to areas of outstanding geological significance.

The proposed area captures some of the most spectacular of all the geological events that gave rise to the North American continent, and is thematically tied together by its geology and the resultant landforms that these geological forces created. The region’s geology and associated climate and landforms can be linked to the themes of **Falls** (waterfalls), **Floods** (ice age glacier melts), **Fire** (volcanism) and **Faults** (underlying forces and faults which created the mountain and valley landscape).

A Geopark in the Barriere to McBride corridor area would align with numerous provincial and regional strategies and planning initiatives. It is consistent with the *BC Jobs Plan*, Destination BC’s redefined brand, TOTA’s 10-year Regional Strategy and the *North Thompson Valley Tourism Plan* (2013) that was a direct output of the government’s Barriere to McBride regional economic pilot initiative. It would also complement and leverage tourism destination, product and market priorities identified in local plans for McBride, Valemount, Blue River, Clearwater, Barriere and Sun Peaks going back more than a decade.

A Geopark would create measurable, positive benefits in the region. The incremental visitation and visitor spending impacts identified in Chapter 5 would benefit the province, the region and individual communities in terms of increased output, direct, indirect and induced employment, associated employment income and value-added (GDP). Tourism is vital to the regional economy and a Geopark would provide a platform for international exposure and prestige. The tourism sector would benefit from the increased spending and opportunities to extend their operations beyond the summer high season. Geoparks appeal to higher spending long-haul visitors, especially European markets where the North Thompson and Robson Valleys already have strong exposure.

The benefits extend well beyond tourism. There would be increased opportunities to attract public and private investment and funding to the area, to promote innovation and sustainable development concepts, to increase social cohesion, community capacity, cultural awareness and community pride, and to engage in scientific research, educational initiatives and the exchange of national and international ideas and cooperation. Collectively, these positive outcomes would help combat a major concern of all communities in the region moving forward—the ageing demographic and threat of depopulation. A Geopark would not be a panacea but it would assist in attracting investment, creating new business activity and generating longer stays and new visitors that would diversify the regional economy and keep communities both healthy and sustainable.

On the basis of the research, and in consideration of expressed stakeholder support, this report recommends proceeding with a Geopark application immediately in order to extract maximum benefits of being an early adopter in North America.

## Appendix: List of Acronyms

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<b>AONB</b>	Area of Outstanding Natural Beauty
<b>CNCG</b>	Canadian National Committee for Geoparks
<b>CTF</b>	Community Tourism Foundations
<b>CTO</b>	Community Tourism Opportunities
<b>DMO</b>	Destination Management/Marketing Organization
<b>EGN</b>	European Geoparks Network
<b>ERGO</b>	English Riviera Geopark Organisation
<b>FLNRO</b>	Ministry of Forests, Lands, and Natural Resource Operations
<b>GDP</b>	Gross Domestic Product
<b>GGN</b>	Global Geopark Network
<b>GIS</b>	Geographic Information Systems
<b>GMG</b>	Geopark Management Group
<b>IUCN</b>	International Union for Conservation of Nature
<b>IUGS</b>	International Union for Geological Sciences
<b>JTST</b>	Ministry of Jobs, Tourism and Skills Training
<b>LRMP</b>	Land and Resource Management Plan
<b>MOTI</b>	Ministry of Transportation and Infrastructure
<b>MOU</b>	Memorandum of Understanding
<b>MRDT</b>	Municipal and Regional District Tax
<b>NORA</b>	Nordic Atlantic Cooperation
<b>RDFFG</b>	Regional District Fraser-Fort George
<b>SRMP</b>	Sustainable Resource Management Plan
<b>TNRD</b>	Thompson Nicola Regional District
<b>TOTA</b>	Thompson-Okanagan Tourism Association
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>WHS</b>	World Heritage Site