

Mountain biking – the economic opportunity and risk for Nelson Tasman

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Executive summary

The Nelson Tasman region is a cycling sanctuary in New Zealand, and mountain biking (MTB) has developed into a vital part of the area's identity, culture, and economics. The MTB network is renowned nationally and internationally for its high standards, accessibility, and distinctive natural features.

In 2018, Business and Economic Research Limited (BERL) completed an analysis that estimated the projected economic benefit generated from MTB in the Nelson Tasman region. We projected for the year 2022 that direct spend from MTB activities would be \$44.2 million, with the flow-on effects of this spend as it ripples (or multiplies) throughout the economy generating \$40.8 million in regional gross domestic product (GDP) and 566 full-time equivalents (FTEs).

However, our world has significantly changed since 2018. The lingering effects of COVID-19 limited international visitors for a long period of time; flooding in August 2022 caused damage to key parts of the MTB network; and logging operations fully halted access to popular parts of the MTB network for a year. These three factors had a compounding effect on MTB, severely limiting access and reducing participation, resulting in lower levels of spending. The absence of this economic activity was a risk for the region. Despite the challenges, the region's MTB network has shown resilience in late 2023, with improved access and recovering participation. This presents an economic opportunity to realise the full potential of MTB.

To account for these challenges, the Nelson Regional Development Agency (NRDA) commissioned BERL to design and develop three scenarios to understand the economic risk or opportunity facing MTB in the Nelson Tasman region at varying levels of access and participation.¹ These scenarios depict the relative experiences of the Nelson Tasman region. All three scenarios are mapped against our benchmark scenario that was previously projected in 2018. Stakeholders were also interviewed as a part of this research to provide insights and information into the current and past context of MTB in the region and how to better realise its potential.

MTB is a significant contributor to the Nelson Tasman economy

Our analysis indicates that the lingering effects of COVID-19, coupled with severely limited access to the MTB network, have had a substantial impact on participation in MTB. These factors diminished the appeal of Nelson Tasman as a cycling haven for both domestic and international visitors, while also limiting its ability to host regional and national events. This has significantly reduced the level of spending that is generated from MTB activities.

The analysis showcases the significant economic benefits that can be generated from MTB activities following well-managed track repair after the Nelson floods and the permanent retirement of logging operations, allowing full access to the MTB network. These benefits are also boosted by improved participation around pre-COVID-19 levels, as well as being in line with recent growth in national participation. This is depicted under scenario three, when the direct level of spending generated from MTB equals \$48.8 million. Once the flow-on effects are taken into account, the

¹ See section 3 for methodology and scenario parameters.

total economic benefit from MTB includes \$45 million in regional GDP and 625 FTEs. This is the potential economic opportunity enabled and created by MTB in the Nelson Tasman region. Under the circumstances of scenario three, the economic benefits generated also exceed what was previously projected for the same year in our benchmark scenario.

However, as of September 2023, although access to parts of the MTB network has improved and participation in MTB is recovering strongly, MTB in Nelson Tasman is not at its full potential. MTB network access restrictions and lower participation still limit the economic benefits that can be generated from MTB. This most closely matches scenario two. Under scenario two, the level of direct spending that is generated from MTB is equal to \$30.3 million. Once this level of spending flows and ripples throughout the local economy, total economic benefits include \$27.9 million in GDP and 388 FTEs. Scenario two indicates that MTB in the region is generating less economic benefits than what was previously projected, with direct spend \$14 million below the benchmark in 2022, total GDP \$12.9 million below, and total FTEs 179 below. These economic benefits are also significantly below the benefits generated when MTB in Nelson Tasman is at its full potential.

To realise this potential, a coordinated and collaborative approach is required, with relationships and partnerships between industry, iwi, and local government. Stakeholders emphasised the importance of infrastructure, resourcing, active and targeted promotion, and on-going management. There was wide recognition of the economic value that can be and has been generated from MTB in the region. This economic value is delivered region-wide, providing boosts for local businesses and people. It was acknowledged that facing this adversity brought on by COVID-19, but especially the floods and logging operations, has fostered resilience amongst the MTB community and industry. MTB is already a valuable component of the Nelson Tasman economy, but there is an opportunity to seize it and support future growth.

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1 Introduction

Business and Economic Research Limited (BERL) was commissioned by the Nelson Regional Development Agency (NRDA) to undertake an economic analysis of MTB to the Nelson Tasman economy to account for the impacts of COVID-19, the flooding in August 2022, and the local forestry closures. Our analysis presents the severe economic risk that exists for the region in the face of MTB not operating to its full potential as a result of limited access to tracks/trails and overall reduced participation. Additionally, we highlight the significant value and importance of MTB to the Nelson Tasman economy and region.

1.1 Approach

To understand the effects of flooding damage and forestry closures, as well as the lingering effects of COVID-19, BERL developed three scenarios to quantify the possible impact and/or loss to the region. The scenarios considered the potential loss of economic value currently, and the on-going loss if infrastructure and access remained limited and not growing relative to the rest of the nation.

These three scenarios are compared against a benchmark scenario. The benchmark scenario is derived from previous work completed by BERL, where projections on the economic impact of MTB in the region were completed for each year between 2017 and 2027.² For this research, the projected economic impact for the year 2022 was inflated to 2022 dollars and used as our benchmark to provide us with a basis for comparison.

This approach differs from traditional economic impact assessments as each scenario accounts for the economic impact of particular shocks. The aim of this research is to estimate the potential economic loss (direct and indirect) to the Nelson Tasman region as a result of MTB in the region, which suffered from reduced access to tracks and participation.

Please see Appendix B for a detailed methodology of the analysis included.

1.2 Scope of analysis

The scope of our analysis includes only the Nelson Tasman region, and all values are presented in 2022 dollars. BERL acknowledges that MTB in the region is not only an important economic contributor but also contributes towards social wellbeing and cultural outcomes. This research, however, only estimates the economic contribution of MTB.

The analysis does not differentiate between the impact felt as a result of the Nelson flooding and forestry closures from logging operations. It was also reiterated by stakeholders that ferry disruptions, which occurred throughout and following our analysis, had a severe impact on non-locals coming to the Nelson Tasman region for MTB. This shock was not within the scope of this research. The characteristics of these scenarios do not suggest outcomes or recommendations. They are hypothetical and reflect different levels of access to and participation in MTB in the Nelson Tasman region.

² <https://www.nelson.govt.nz/assets/Recreation/Downloads/mountain-biking/reports/BERL-Economic-benefits-of-Mountain-Biking-for-Nelson-Final-report-13Feb2018.pdf>

This research was primarily a desk-based exercise to provide input into the decision-making process for the NRDA. To add additional context and insights into the situation faced by MTB in the Nelson Tasman region, BERL interviewed four stakeholders put forward by the NRDA - Ngāti Koata and three stakeholders who operate different parks in the region. The interviews were high-level, with questions focused on understanding their views and perspectives on the various impacts on MTB in the region.

1.3 Data caveat

The initial design and development of the three scenarios that form the core of this research were intended to present varying levels of access and participation. Scenario one was designed as a reflection of the current situation; scenario two modelled a recovering trajectory; and scenario three presented the full potential of MTB in Nelson Tasman.

As of September 2023, following well managed MTB network repair and management work, combined with recovering numbers of visitors, the region is now in a stronger position than what was modelled in scenario one. The current position of the region now most closely matches scenario two. That is, access to the MTB network has improved, and participation in MTB is returning to pre-COVID-19 levels.

2 Setting the scene

2.1 The importance of MTB in the Nelson Tasman region

Landscape suited for MTB

The Nelson Tasman region offers a diverse and distinctive range of natural terrain and landscape that bolsters its reputation in MTB. The region features a variety of trails and tracks from beginner to advanced across the MTB network, including country, downhill, and enduro tracks. Further, MTB in the region benefits from the relative proximity of each trail and track. The network is maintained to a high standard, making it safe and enjoyable for riders of all levels, whether they are competitive or recreational riders. All these factors cater well to group participation, as competitive riders are able to bring their partners, friends, or children with them.

The region has been rated as a Gold Ride Centre by the International Mountain Bicycling Association and is known as one of the six MTB paradises in the world. This reputation has acted as a ‘pull’ with people moving to the region on a lifestyle basis for MTB. This was reiterated by stakeholders, who further highlighted the value that is gained from this reputation and advantage. Recent growth in e-bikes has also significantly benefited the region, with growing participation seen nationally and regionally as the available demographic that typically takes part in MTB has increased. According to Nelson Mountain Bike Club’s (NMTBC) Strategic Plan, the substantial number of club members and followers has increased over the years. In 2015, the club had 1,200 members, which increased to 3,897 members in 2021.³

The role of MTB as an important economic contributor

MTB is an important activity in the Nelson Tasman region, contributing to the local economy, promoting health and well-being, and providing a unique and enjoyable outdoor experience for locals and tourists alike. Non-local MTB users who visit the region for its facilities are particularly important contributors to the local economy, spending their money at local businesses (such as local accommodation, cafes, bars, restaurants, and retailers) throughout their stay.

Its ‘pull’ has also resulted in high-value individuals moving to the region for MTB, which has added notably to the workforce and the economy. Again, this was particularly recognised and emphasised by stakeholders. The region regularly hosts regional and national cycling events, including national championships. There have also been opportunities to host international cycling events. These events are significant contributors to the local economy, acting as important one-off or annual injections into the economy. Stakeholders also identified the benefits of such events extending past just one-off injections into the economy, noting that event promotion and success contribute to improving the overall reputation and ‘pull’ of the region.

These benefits associated with MTB and the overall environment, facilities, and culture of MTB in the Nelson Tasman region have resulted in MTB becoming a key contributor to the local economy.

³ https://nelsonmtb.club/wp-content/uploads/2022/04/NMTBC-Strategic-Plan-2022_FINAL.pdf

BERL Economic Impact Assessment of MTB – Our benchmark scenario

BERL conducted an Economic Impact Assessment (EIA) of MTB using input-output analysis in the Nelson Tasman region in 2018. *The report highlighted that in 2017 the total economic contribution of MTB was \$15.5 million in gross domestic product (GDP).* This research also estimated the projected economic benefit generated from MTB activities for each year between 2017 and 2027. For the year 2022, it was projected that direct spend from MTB activities would be \$44.2 million, with the flow-on effects from this spend as it ripples (or multiplies) throughout the economy generating \$40.8 million in regional gross domestic product (GDP) and 566 full-time equivalents (FTEs).

This study indicated that the region has huge potential to further develop as a regional cycling hub and could attract more tourists and visitors by hosting major international cycling competitions. Particularly contributing to this growth in recent years has been the rapid rise of e-bikes and the continued growth in participation in MTB more broadly.

2.2 The compounding impact of multiple shocks

However, our world has significantly changed since 2018. The Nelson Tasman region has been severely impacted by the lingering effects of COVID-19, flooding damage in August 2022, and local forestry closures due to logging operations. These factors had a compounding effect, halting access to key and popular parts of the MTB network and significantly reducing participation in MTB.

As of September 2023, access to the MTB network has greatly improved, and participation is recovering strongly. The Nelson Tasman region has shown resilience in the face of this adversity.

COVID-19 and the consequent border closures resulted in a loss of international visitors for an extended period of time. International visitors were an important market for MTB in Nelson Tasman. Domestically, for a shorter period of time, riders from outside of the region were not able to come and use the tracks. This loss of visitors contributed to a notable reduction in spending within the region. Reduced levels of spending (expenditure) have negative flow-on effects as this spending ripples throughout the economy. More recently, there has been a strong recovery in international visitor numbers in New Zealand, which has provided necessary relief across the country. The firm grasp that COVID-19 initially had over multiple aspects of the economy, particularly the flow of domestic and international visitors, has now loosened significantly.

The **Nelson floods** in August 2022 had a damaging impact on the Nelson region. In the case of MTB, many tracks and trails were damaged and were closed for a significant period of time, including the Maitai Hub and trails throughout the Sharlands and Codgers networks. This meant access to particular tracks and trails in the region was limited.

As of September 2023, access to the MTB network has improved significantly following well managed repairs by the NMBTC and volunteers. Improved access has encouraged an increase in participation.

The impact of the floods was further compounded by **forestry closures** at the same time in Nelson. A large proportion of forestry land in the Nelson Tasman region is Ngāti Koata land, which is leased out for forestry/logging activities and kindly made available for recreational use as well. In particular, this includes the Sharlands MTB area, which is one of the most popular collections of trails in the region. These closures further limited MTB access to important sections of the Nelson Tasman MTB network. Logging operations in Maitai and Sharlands have since been completed, which has enabled recreational access once again. There is an understanding of the importance of this closure from a commercial, health, and safety point of view.

Overall, access to the MTB network in the region was significantly reduced due to multiple external factors that had a compounding impact on MTB in the region. The large variety, locality, and close proximity of tracks and trails have historically been a key part of the region's image and 'pull'.⁴ This was further confirmed by stakeholders. This had a consequent impact on visitor numbers in the region, as well as impacting local participation, with, in some cases, locals opting to MTB elsewhere during this period.

Temporary permit data to access particular tracks substantiates this impact, with only six permits purchased from the NMBTC in December 2022, compared to 27 in December 2021.⁵ All that MTB in Nelson Tasman has to offer was negatively impacted.

These impacts posed challenges when planning for local and international events, as well as the regions' ability to bid for and host them. For example, the region was unable to run the EWS World Enduro as a result of COVID-19, which would have been the region's largest cycling event to date. National and regional events were also cancelled. As of September 2023, event organiser and participant confidence have since returned, and Nelson recently hosted the Aorere Enduro 2023.

Reduced access and participation impacted levels of spending

Limited access to the MTB network and reduced participation in MTB severely lowered the level of spending (expenditure) generated in the local economy. The inability of the Nelson Tasman region to offer and promote the full package of MTB during this period had a strong negative impact on the local economy. A historically important source of spending was not being generated. As of September 2023, access to and participation in MTB in the Nelson Tasman region have improved significantly and are continuing to recover. Trail and track repairs have reopened key parts of the local MTB network. Logging operations in Maitai and Sharlands have been completed. Additionally, international visitor numbers are recovering strongly. This has boosted economic activity generated by MTB in the region.

⁴ Appendix A shows the major MTB track and trail networks in the Nelson Tasman region, and the current status, as of 23 September 2023, of each trail network, in regard to storm damage and logging activities closures.

⁵ Temporary permit data was provided by the NRDA.

3 Methodology

Our starting point is the research that BERL completed in 2018 – an EIA of MTB using input-output analysis in the Nelson Tasman region. This analysis projected forward the economic impact of MTB to the region for each year between 2017 and 2027. The projected economic impact for the 2022 year forms our benchmark scenario (after being adjusted to 2022 dollars). A benchmark provides us a basis for comparison.

Our methodology then estimated the economic contribution of MTB under different scenarios mapped against our benchmark. We developed three scenarios, depicting varying levels of access to and participation in MTB in the region (please see section 1.3). These three scenarios are to be viewed in comparison with the benchmark scenario.

Scenario structure

All three scenarios, and our benchmark scenario, estimated the loss from:

- Reduced visitor spending
- Retaining spending
- Inability to bid for/host events.⁶

Each scenario presents the potential economic contribution to the region under the differing parameters of each scenario. This is then mapped against our benchmark scenario. The difference between the economic contribution of each scenario then presents the potential economic risk (or opportunity) that exists at the varying levels of access and participation. To understand the flow-on effects that are generated from direct expenditure in a local economy, multiplier analysis has been used to estimate the wider economic risk (or opportunity).

The reason for developing three scenarios, which in one form could be interpreted as low, medium, and high scenarios, is to ensure we present a range of possible outcomes. The overall impact of COVID-19, the floods, and the forestry closures is not completely apparent, but presenting three varying scenarios enables comparison between potential outcomes.

3.1 Introducing our scenarios

We first define each of the scenarios then present the calculations and assumptions included in them. Each scenario is comprised of the same headline variables – total domestic expenditure, total international expenditure, and total expenditure leaving (resulting from locals leaving the region). These three variables combine to form:

$$\text{Total direct spend} = (\text{Domestic expenditure} + \text{International expenditure}) - \text{Expenditure leaving}$$

Once the total direct spend is calculated we can feed this into our multiplier model to calculate the wider economic impact. Multiplier analysis is summarised in Section 3.2. Please see Table 1 for a

⁶ Please see Appendix B for a description of the three areas of spending, and the methodology and sources used to calculate them

summary of the estimates comprising each scenario. It is important to note that the estimates and assumptions within each scenario can be adjusted if necessary.

Please see section 1.3 for a data caveat surrounding the three scenarios.

Scenario one

Scenario one presents MTB at a low limit of capacity, where access and participation are notably impacted. It is a reflection of the period of time where access to, and participation in, MTB was particularly limited (late 2022 to early 2023). That being, when trail and track repair was still underway, forestry/logging operations were still being completed, and international visitor numbers remained low. Characteristics of scenario one include:

- Lingering effects of COVID-19 has meant international visitor numbers have not returned to pre-COVID-19 levels
- Damage from the Nelson flood has limited access to particular tracks, limiting the appeal of MTB in the region to domestic and international users. This has resulted in a decrease in the number of visitors coming from outside the region, a further reduction in international visitors, and local MTB users leaving the region to MTB elsewhere
- Forestry closures have had a compounding impact, halting access to popular tracks, again limiting the full appeal of MTB in the region to domestic and international users. This has resulted in a decrease in the number of visitors coming from outside the region, a further reduction in international visitors, and local MTB users leaving the region to MTB elsewhere.

In particular, the final two characteristics have significantly impaired the region's ability to bid for international events, as well as plan for domestic events. These events can often be of notable economic benefit to the region.

Assumptions

This scenario is based on 2021 visitor numbers which were impacted by COVID-19, and assumes international visits are ten times less than pre-COVID-19 levels, and further assumes an additional 20 percent decline in domestic visits as a result of the reduced appeal of MTB in the region. We also assume that higher numbers of local riders will leave Nelson Tasman to seek MTB in other regions.

Scenario two (assessed current state as of September 2023)

Scenario two presents MTB in the Nelson Tasman region slowly returning to pre-COVID-19 levels with improved access and participation across the network. Characteristics of scenario two include:

- Lingering effects of COVID-19 have started to ease, with international visitor numbers recovering closer to pre-COVID-19 levels

- Damage from the Nelson flood has limited access to particular tracks, but trail repair has opened access to particular parts of the network, re-growing the appeal of MTB in the region domestically and internationally. This has resulted in fewer local MTB users leaving the region in order to MTB elsewhere compared to scenario one, as well as larger numbers of domestic and international visitors coming from outside the region
- Forestry closures have had a compounding impact, halting access to popular tracks within the region, but partial access is available when forestry companies are not required to withdraw access. This has still resulted in a decrease in the number of MTB visitors coming from outside the region and a reduction in international MTB visitors, as well as local MTB users leaving the region, however, to a lesser extent than in scenario one.

The ability for the region to bid for international events, as well as plan for domestic events, has improved. However, as MTB in the region is still not operating at full capacity it remains challenging to do so.

Assumptions

Scenario two is based on 2021 visitor numbers which were impacted by COVID-19, assuming international visitor numbers are equivalent to half of what they were pre-COVID-19. It assumes an additional ten percent decline in domestic. We also assume moderate levels of local riders will leave Nelson Tasman to MTB elsewhere.

Scenario three

Scenario three presents MTB in the Nelson Tasman region operating at full capacity. Characteristics of scenario three include:

- International MTB visitors have returned to pre-COVID-19 levels
- Damage to particular tracks resulting from the Nelson floods have been repaired. This has meant that local MTB users no longer feel the need to leave the region for MTB, and has contributed to restoring the full appeal of MTB domestically and internationally
- Full access for recreational use has been granted and commercial forestry activity has permanently ceased. Similarly, this has meant local MTB users no longer feel the need to leave the region for MTB, and has contributed to restoring the full appeal of MTB domestically and internationally.⁷

The Nelson Tasman is now in a strong position to bid for international MTB events and host domestic events with the MTB tracks and facilities in the region operating at full capacity.

⁷ This is a hypothetical outcome to reflect the full economic value that can be generated from having complete access to tracks and trails in the Nelson Tasman region.

Assumptions

Scenario three assumes international visitor arrival numbers have fully returned to near pre-COVID-19 levels as a result of borders opening up globally. Domestic visitor numbers increase by an additional ten percent compared to 2021 visitor numbers as MTB participation increases around New Zealand (identified in the Sports Active NZ Survey). The number of local riders leaving Nelson Tasman has fully returned to pre-COVID-19 levels.

Our benchmark scenario

The benchmark scenario is based on a previously projected economic impact for the year 2022 from BERL's 2018 EIA of MTB in the region. This scenario provides us a basis for comparison. It reflects what the economic benefits from MTB were expected to be prior to the various shocks experienced in the region. This scenario is not to be viewed separately. It is to only be viewed as a comparison against the first three scenarios.

Assumptions

This scenario assumes international and domestic MTB visitors would increase by ten percent each year between 2017 and 2027. It also accounts for corresponding growth in the number of family and friends who might accompany the MTB visitors. It is a pre-COVID-19 forecast and estimate to benchmark the other three scenarios against.

3.2 Multiplier analysis

Once we have calculated the total direct spend under each scenario, we are able to feed this into our multiplier model to estimate the wider economic impact of that spend under each scenario. This enables us to estimate the flow-on effects to provide an estimate of the total economic impact. The results are presented through GDP, FTEs, as well as expenditure. For a more detailed explanation of multiplier analysis please see Appendix B.

Example of what multiplier analysis captures

In the case of MTB, when an international visitor (or non-local domestic visitor) arrives in the Nelson Tasman region to MTB, they on average, tend to make a range of direct purchases during their stay. These purchases can include accommodation, food, and visits to cafes and restaurants.

This direct expenditure creates flow-on effects. The café the international visitor may buy something from will in turn make purchases from their suppliers, for goods such as coffee beans. And again, in turn, their suppliers will then make purchases from their own suppliers, such as a packing company. This generates our indirect (upstream) effect.

Meanwhile, people employed at the café and the supplier firm, earn income from their labour (mostly wages and salaries, but also profits). Once tax is deducted, this employee will spend their income on consumption, say at a Nelson Tasman grocery store. This represents the induced (downstream) effects.

4 The economic opportunity and risk

MTB has become a key component of the Nelson Tasman region's image and culture. Importantly, it is a significant contributor to the local economy. However, within the past few years, the impact of COVID-19 reduced participation, and the Nelson floods in August 2022 and recent forestry closures limited access to tracks and trails, while also reducing participation. These impacts consequently reduced the levels of spending within the Nelson Tasman economy for a significant period.

Access to the overall MTB network has since improved and is still recovering. Trail and track repairs have enabled improved access, while international visitor numbers have also recovered strongly. This has built momentum in the region, but the full economic potential of MTB in the Nelson Tasman region has not yet been reached.

The following section presents a comparison between the economic benefits generated from each scenario. This comparison presents the potential economic risk and opportunity that exist at different levels of MTB network access and participation. Firstly, an overview of the inputs in each scenario is presented, followed by a depiction of the direct economic spend that is generated by each scenario in comparison to the benchmark scenario. The section then expands on this comparison, providing a comparison of the flow-on effects that are created by each scenario. These comparisons highlight the economic risks that exist in scenarios one and two while showcasing the economic opportunity and potential of scenario three.

4.1 Overview

Table 1 presents a summary of the parameters and estimates shaping each of the three scenarios, and the level of expenditure generated under them.

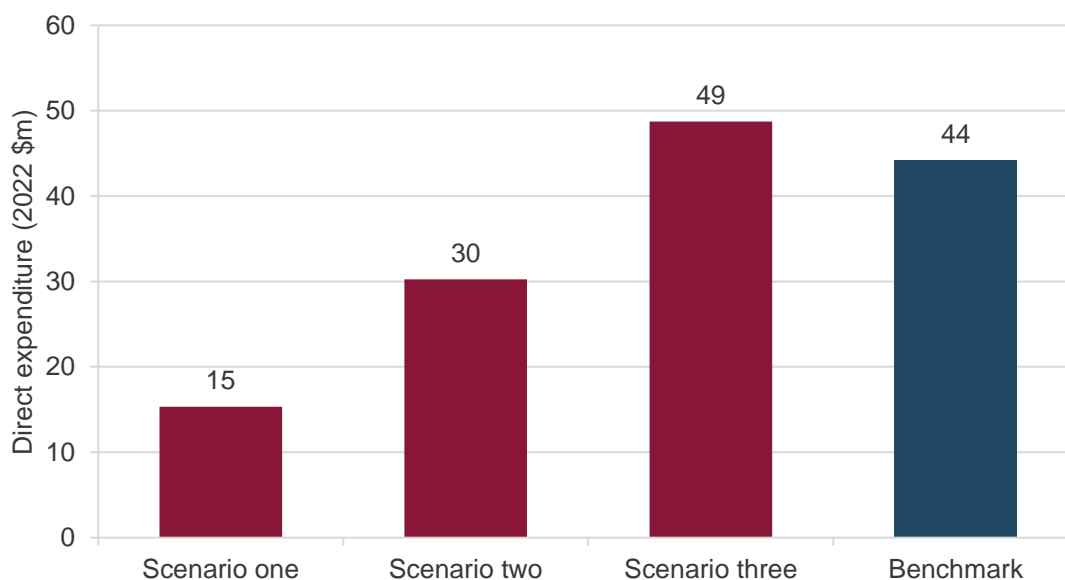
Table 1: Summary of parameters and inputs/outputs of scenarios

Key parameters	Scenario one	Scenario two	Scenario three
Total domestic visits for MTB	26,750	30,090	36,780
Average number of nights	2.95	2.95	2.95
Average spend per day	220	220	220
Total domestic expenditure (\$m)	26.0	29.3	35.8
Total international visits for MTB	1,520	6,010	15,000
Average number of nights	2.95	2.95	2.95
Average spend per day	220	220	220
Total international expenditure (\$m)	1.5	5.9	14.6
Local riders riding elsewhere	4,170	2,500	1,670
Average number of trips away	3	2	1
Total expenditure leaving (\$m)	12.2	4.9	1.6
Total direct spend (\$m)	15.3	30.3	48.8

Figure 1 depicts the potential expenditure structure under the three scenarios, with a fourth bar depicting the potential expenditure of our benchmark/comparator scenario. Under scenario one the

potential expenditure is \$15 million. This indicates that with MTB in the region operating notably below full capacity, expenditure is significantly below its potential.

Figure 1: Direct spend (expenditure) generated from MTB activities in Nelson Tasman



Under scenario three the potential expenditure is \$49 million – this indicates that with MTB in the region operating at full capacity, expenditure generated from MTB is able to exceed that previously estimated in 2018 (our benchmark scenario which estimated expenditure of \$44 million).

4.2 Comparative loss and or opportunity

Table 2 depicts a comparative loss or gain of each scenario against our benchmark. This table presents the economic loss or opportunity which exists when MTB in the Nelson Tasman region is operating at different levels of capacity.

Table 2: Summary of direct and total loss/gain from MTB activities, 2022

	Direct loss/gain	Total loss/gain
Scenario one		
Expenditure (\$m)	-28.9	-53.2
GDP (\$m)	-13.9	-26.7
Employment (FTEs)	-257	-370
Scenario two		
Expenditure (\$m)	-14.0	-25.7
GDP (\$m)	-6.7	-12.9
Employment (FTEs)	-124	-179
Scenario three		
Expenditure (\$m)	4.5	8.4
GDP (\$m)	2.2	4.2
Employment (FTEs)	40	58

Under scenario one, which reflects MTB in the region operating with limited access and low participation, the potential loss in direct spending (expenditure) is \$28.9 million, with a \$13.9 million loss in direct GDP. That is, when MTB in the Nelson Tasman region is operating significantly below capacity, the direct economic activity (GDP) generated from MTB would be \$13.9 million below its full potential.

Whilst considering the multiplier effect, as spending moves and flows throughout the wider regional economy, the potential loss to spending would be equal to \$53.2 million. Additionally, the region would be at risk of potentially not generating an additional contribution to GDP of \$26.7 million and not supporting 370 FTEs.

Under scenario two, which reflects MTB in the region slowly recovering to pre-COVID-19 levels, with improved access to the MTB network, but still notably below full potential, the potential loss to direct spending (expenditure) is \$14 million, with a \$6.7 million loss to direct GDP. Scenario two is most reflective of the current circumstances for MTB in Nelson Tasman.

As this direct expenditure flows throughout the economy, the wider potential economic loss includes \$25.7 million in direct spending, and without this spending, the region would lose the potential contribution of \$12.9 million to GDP and the employment of 179 FTEs.

Under scenario three, which reflects a situation of full access to tracks and trails, and pre-COVID-19 levels of international and domestic visitors, with further improved participation in MTB as seen nationally, the region would potentially generate direct spending (expenditure) \$4.5 million higher than the benchmark scenario.

As this ripples throughout the Nelson Tasman economy, the Nelson Tasman region would generate total spending (expenditure) \$8.4 million higher than the benchmark, total GDP contribution \$4.2 million higher, and a further 58 FTEs.

4.3 The economic risk

The above analysis indicates that the Nelson Tasman region and economy has the potential to suffer a significant economic risk when full access to tracks and trails is limited and overall participation is below potential levels. However, it also indicates the economic opportunity that exists when such access is not limited, and participation has recovered. This was reiterated by stakeholders who indicated the utmost importance of MTB in the region as a key contributor to the Nelson Tasman economy.

5 The economic potential of MTB

The following section showcases each scenario individually, then discusses the economic risk or opportunity that exists at the varying level of access and participation encased within each scenario.

5.1 Benchmark scenario

The benchmark scenario is derived from previously completed analysis in 2018 that projected the future economic impact of MTB in the region for the years 2017 to 2027. Under this scenario, we assumed that international and domestic visits would increase by ten percent per annum from 2017 through to 2027.

Table 3: Economic impact of benchmark/comparator scenario, 2022

	Direct	Indirect	Induced	Total
Expenditure (\$m)	44.2	21.5	15.8	81.5
GDP (\$m)	21.3	10.5	9.0	40.8
Employment (FTEs)	393	101	72	566

This scenario is only to be viewed in comparison to the other three scenarios. It provides us with a basis for understanding the position of the Nelson Tasman region across each of the three scenarios in comparison to what the economic potential of MTB was projected in 2018 to be for the year 2022. All values have been inflated to 2022 dollars.

5.2 Scenario one

Table 4 shows that in 2022, under scenario one, direct spending of \$15.3 million would occur annually as a result of MTB activities in the region with limited access to the MTB network and significantly reduced participation. The decrease in international and domestic visitors, coupled with more locals leaving, would have a profound impact on spending generated locally – stakeholders confirmed this impact. This indicates that \$15.3 million in direct spending would, in the first instance, generate \$7.4 million in direct GDP and provide direct employment for 136 FTEs.

Once multiplier effects are taken into account, the \$15.3 million of direct spending will increase to a total of \$28.3 million, would generate a total of \$14.2 million in GDP, and total additional employment of 197 FTEs for the Nelson Tasman region.

Table 4: Economic impact of scenario one, 2022

	Direct	Indirect	Induced	Total
Expenditure (\$m)	15.3	7.5	5.5	28.3
GDP (\$m)	7.4	3.6	3.1	14.2
Employment (FTEs)	136	35	25	197

Economic risk

This analysis indicated that when international and domestic visitor numbers are significantly low as a result of the lasting effects of COVID-19 and trail closures from the floods and forestry activities,

as well as local MTB users leaving, the region is at risk of generating \$28.9 million less than previously expected (as evidenced in Table 2). Once multiplier effects are taken into account, under scenario one, total GDP generated would be \$26.7 million below previous projections, and total FTEs created would be 370 below.

5.3 Scenario two

For scenario two, which assumes MTB in the Nelson Tasman region is operating below full capacity, but has experienced some level of recovery with more trails and tracks opening up for access following well managed repairs and the arrival of more domestic and international visitors, direct expenditure of \$30.3 million would be generated in 2022 (as presented in Table 5). This expenditure would generate \$14.6 million directly in GDP and provide employment directly for 269 FTEs. Once multiplier effects are taken into account, the \$30.3 million of direct spending would increase to a total of \$55.8 million, will generate a total of \$27.9 million in GDP, and total additional employment of 388 FTEs for the region.

Table 5: Economic impact of scenario two, 2022

	Direct	Indirect	Induced	Total
Expenditure (\$m)	30.3	14.7	10.8	55.8
GDP (\$m)	14.6	7.2	6.2	27.9
Employment (FTEs)	269	69	49	388

Economic risk

This analysis indicated that when international and domestic visitor numbers are significantly low as a result of the lasting effects of COVID-19 and trail closures from the floods and forestry activities, as well as local MTB users leaving, the region is at risk of generating \$28.9 million less than previously expected (as evidenced in Table 2). Once multiplier effects are taken into account, under scenario one, total GDP generated would be \$26.7 million below previous projections, and total FTEs created would be 370 below.

Scenario two presents an improved position compared to scenario one. Access has improved, and participation is recovering. The analysis indicated that the region would generate \$14 million less in direct spending than our benchmark scenario. As this spending flows throughout the economy, total GDP generated would be \$12.9 million below our benchmark, and total FTEs created would be 179 below.

5.4 Scenario three

Scenario three presents MTB in the Nelson Tasman region operating at full capacity. There is complete access to the trails and tracks within the region, and domestic and international visitor numbers have not only returned to pre-COVID-19 levels but have exceeded them in line with the national growth of MTB participation. In addition, with all tracks open for access, local MTB users no longer need to leave the region to MTB elsewhere.

Under this scenario, \$48.8 million in direct expenditure would occur annually as a result of MTB in the region. This suggests that \$48.8 million in direct spending would in the first instance generate

\$23.4 million in GDP and provide employment for 433 FTEs as shown in the Table 6. As this ripples throughout the Nelson Tasman economy, total expenditure of \$89.9 million would be generated, as well as a total contribution towards GDP of \$45 million and a total creation of 625 FTEs.

Table 6: Economic impact of scenario three, 2022

	Direct	Indirect	Induced	Total
Expenditure (\$m)	48.8	23.7	17.4	89.9
GDP (\$m)	23.4	11.6	10.0	45.0
Employment (FTEs)	433	112	80	625

Economic opportunity

At full potential, with complete access to the MTB network and participation in MTB at pre-COVID-19 levels and in line with national growth, the Nelson Tasman region can generate significant economic benefits. Compared to the benchmark scenario, direct spending generated in scenario three would be \$4.5 million higher.

As this higher level of spending ripples throughout the economy, under this improved landscape, total expenditure generated could potentially be \$8.4 million higher than the benchmark, total GDP could be \$4.2 million higher, and there could be the creation of an additional 58 FTEs.

6 Realising economic potential

MTB is a key contributor to the Nelson Tasman region. It has become a key part of the local culture and identity while being a significant provider to the local economy. This particular benefit was clearly evidenced in 2018, with the economic benefits of MTB estimated to contribute \$15.5 million to local GDP in 2017.

However, since 2018, the lingering effects of COVID-19, flooding in August 2022, and forestry closures have all restricted the economic benefits that can be generated from MTB in Nelson Tasman. Throughout late 2022 and early 2023, these factors were cumulatively particularly impactful. As of September 2023, however, the region has shown great resilience in the face of this adversity with improved access to the MTB network and recovering levels of participation in MTB.

Our analysis not only showcased the economic risk that the Nelson Tasman region was exposed to throughout this adversity, but highlighted the economic opportunity that exists for the region as it emerges from this adversity. Interviewees expressed the overall importance of MTB in the Nelson Tasman region, not only as an economic contributor, but as a part of the region's culture and image. There was wide recognition of the economic value that can be, and has been, generated from MTB in the Nelson Tasman region. It was emphasised that it is necessary for MTB in the region to operate at its full potential, and with appropriate resourcing, promotion, and management, to fulfil its potential. This potential is represented in scenario three, where the economic benefits generated from MTB activities exceeds previously projected estimates.

Negative impacts and conflicting interests have limited the ability for MTB in Nelson Tasman to reach its full potential. To realise the economic potential of MTB and promote future growth, strong relationships and partnerships between local government, land-owners, businesses, and iwi are essential, along with supporting infrastructure, active and targeted promotion, and ongoing management.

Appendix A Major MTB track networks and status

The following table presents the status of the MTB tracks and trails available in the Nelson Tasman region (as at September 2023). It also depicts their grade and current status.

Name	Location	Type	Grade	Comments
Cable Bay	Nelson	Privately owned adventure park with a range of activities and trails	3-4	Cable Bay DH trail closed due to water damage
Codgers	Nelson	Popular network and a common access point for Coppermine Trail.	2-4	Open
Coppermine Trail	Nelson - part of Ngā Hearenga NZ Cycle Trail network	Historic trail to Coppermine Saddle and down into Maitai Valley	2-4	One of the two trails closed due to storm damage
Great Taste Trail	Nelson Tasman: part of Ngā Hearenga NZ Cycle trail network	Popular trail originating in Nelson and circumventing Tasman District.	1-2	Open
Heaphy Track	Tasman	Epic two-day ride in Kahurangi National Park	4	Open
Kaiteriteri Park	Kaiteriteri	MTB Park, a variety of trails	2-5	Open
Maitai Codgers	Nelson	Popular network of MTB trails through private forests	3-6	Open
Marsden Valley	Nelson	Council owned network of trails	2-5	Four trails closed due to storm damage and logging activity
Other	Nelson/Tasman	Various other shared trails, throughout in National Parks	2-5	Open with only a few trails limited due to storm damage
Rabbit Island	Tasman	Small networks of trails in forest areas	2	Open
Rameka Track	Takaka	Classic, top rated ride	4	Open
Richmond	Tasman	Network of trails through privately managed forests	3-4	Two trails closed due to logging activity, but three limited due to storm damage
Sharlands	Nelson	Popular network of MTB trails through private forests	2-5	Around two thirds of this area remains closed
Silvan Forest	Richmond	MTB Park built in a private forest. Links to Richmond Hills	2-5	Two trails closed due to logging activity
Wairoa Gorge	Wakefield	Privately owned world-class MTB Park available for commercial use	3-5	Open

For a list of trails, please also refer to <https://nelsonmtb.club/trails/>.

Appendix B Economic impact assessment method

Scenario estimates

Our scenarios calculate three important areas of spending, these being:

Loss of visitor spending

Visitor spending is spending which is generated from non-local (domestic and international) MTB participants coming into the Nelson Tasman region. When such participants visit, they often spend money on a variety of things, such as accommodation, food, and retail. This also tends to occur over a few days, depending on the length of their stay, generating notable spending within the local economy.

To calculate the loss of visitor spending we first estimated the number of MTB participants visiting the region. We then calculated the proportionate change in visitor numbers, and the total amount of lost spending in each scenario using average visitor spend data. Domestic visitor numbers are based on numbers outlined in the Ministry of Business, Innovation, and Employment (MBIE) 2021 evaluation of great rides in New Zealand. Similarly, international numbers are based on commercial accommodation numbers in the same MBIE 2021 evaluation. Spending amounts come from the MBIE's tourist spend data for Nelson and Tasman.

Loss of retained spending

Retained spending is spending from Nelson Tasman locals who keep their consumption of goods and services within the local economy. A loss of retained spending can occur when Nelson Tasman locals leave the region, say for a MTB event in a different region, and spend their income on goods and services there.

In understanding the economic loss of retained spending, we estimated the proportion of locals who may have taken their income (retained spending) elsewhere for MTB in the absence of having access to specific trails due to the August floods. This is equivalent to the amount of spend usually added to the Nelson Tasman economy from non-local MTB users coming into the region and spending their income. That is, we assume that the loss incurred to the Nelson Tasman economy from locals leaving Nelson Tasman for MTB will be equal to that of the average spending of non-locals who come into the region for MTB.

For example, if the average daily spend of non-local visitors was \$220 per person, then the average loss incurred for Nelson Tasman locals leaving the region for MTB will be equal to \$220 per person and per day. This assumption operates on the basis that people will always forgo their disposable income and their spending will no longer occur locally in the Nelson Tasman economy.

Loss of the ability to bid for and host events

The ability to bid for and host events for the Nelson Tasman region has to be supported by having most, if not all, tracks and trails available for use. The region needs to be operating at full capacity for events to occur as effectively and as often as possible.

To estimate the loss of the ability to bid for and host events we used the BERL NRDA Te Taihu Cycling Activities and Events Strategy 2022 report to understand which events, and how many, have possibly been unable to occur, or the potential to occur has not existed due to trail closures.

Multiplier analysis

The underlying logic of a multiplier model can be explained as follows. An initial expenditure (direct effect) in an industry creates flows of expenditure that are magnified, or “multiplied”, as they flow on to the wider economy. This flow occurs in two ways:

- Industry purchases materials and services from supplier firms, who in turn make further purchases from their suppliers. This generates an indirect (upstream) effect
- People employed in the direct development, and in firms supplying services, earn income (mostly from wages and salaries, but also from profits) which, after tax is deducted, is then spent on consumption. There is also an allowance for some savings. These are the induced (downstream) effects.

Hence, for any amount of spend in an area (direct effect), the actual output generated from that spend is greater once the flow-on activity generated (indirect and induced effects) is taken into account.

This multiplier analysis uses multipliers derived from inter-industry Input-Output tables for the Nelson Tasman region. Input-Output tables have been derived from the national Input-Output tables and other data by Butcher Partners, Canterbury - a recognised source for regional Input-Output tables and multipliers.

Multipliers allow us to identify the direct, indirect, and induced effects of additional activity or expenditure in terms of output (GDP) and full-time equivalent (FTE) employment.

Measures

Gross Output Multipliers

Gross output is the value of production, built up through the national accounts as a measure, in most industries, of gross sales or turnover. This is expressed in \$million at constant prices. Gross output is made up of the sum of:

- compensation of employees (i.e. salaries and wages)
- income from self-employment
- depreciation
- profits
- indirect taxes less subsidies
- intermediate purchases of goods (other than stock in trade)

- intermediate purchases of services.

Value Added (GDP) Multipliers

Value added multipliers measure the increase in output generated along the production chain, which, in aggregate, totals Gross Domestic Product (GDP). Value added is made up of the sum of:

- compensation of employees (i.e. salaries and wages)
- income from self-employment
- depreciation
- profits
- indirect taxes less subsidies.

Employment Impact Multipliers

Employment impact multipliers determine the number of FTE roles that are created for every \$1 million spent in an industry for one year. It provides a measure of total labour demand associated with gross output.

An FTE is the percentage of time an employee works represented as a decimal. A full-time position is 1.00; a part-time position is 0.33.

Direct, indirect, and induced effects

The underlying logic of multiplier analysis is relatively straightforward. An initial expenditure (direct effect) in an industry creates flows of expenditures that are magnified, or “multiplied”, as they flow on to the wider economy.

This flow occurs in two ways:

- The industry purchases materials and services from supplier firms, who in turn make further purchases from their suppliers. This generates an indirect (upstream) effect.
- People employed in the direct development, and in firms supplying services, earn income (mostly from wages and salaries, but also from profits) which, after tax is deducted, is then spent on consumption. There is also an allowance for some savings. These are the induced (downstream) effects.

Hence, for any amount spent in an area (direct effect), the actual output generated from that spend is greater once the flow-on activity generated (indirect and induced effects) is taken into account.

Leakages

Generally, the more developed, or self-sufficient an industry in a region is, the higher the multiplier effects. Conversely, the more reliant an industry is on supply inputs from outside the region, the lower the multipliers. These outside factors can be referred to as “leakages”.

To put this another way, if a house was purchased in Nelson, and all the materials and labour were sourced in Nelson, and all the materials and labour that went into making the housing materials

were also sourced in Nelson, and then that labour spent their wages or salaries in Nelson, again on goods or services produced solely in Nelson, then all the multiplier effects would be captured in Nelson. Where inputs or outputs come from outside the region, leakages are said to exist, and the multiplier effect is reduced.

Limitations of multiplier analysis

Partial equilibrium analysis

Multiplier analysis is only a “partial equilibrium” analysis, assessing the direct and indirect effects of the development being considered, without analysing the effects of the resources used on the wider national and regional economy.

In particular, it assumes that the supply of capital, productive inputs, and labour can expand to meet the additional demand called forth by the initial injection and the flow-on multiplier effects, without leading to resource constraints in other industries. These constraints would lead to price rises and resulting changes in the overall patterns of production between industries.

To assess inter-industry impacts in full would require economic modelling within a “general equilibrium” framework. Applying such models becomes more relevant where the particular development is considered significant within the overall economy.

Impact

Again, related to “partial equilibrium”, multiplier analysis assumes that an event will not have an impact on relative prices. However, in a dynamic environment, it can be assumed that a large event would have an impact on demand and supply and thus prices. Hence, the larger the event, and the more concentrated it is in a single industry or region, the more likely it is that the multipliers would give an inaccurate analysis of impacts. For example, if multiplier analysis was used to determine the effect of residential building construction nationally it would probably be inaccurate as residential building construction accounts for over six percent of GDP.

Aggregation

Industries outlined in Input-Output tables are aggregates of smaller sub-industries. Each sub-industry has unique inputs and outputs. The higher the level of aggregation the less accurate these inputs and outputs become. Thus, if determining the multiplier effect of a very specific event using highly aggregated data, there will be a lower level of accuracy. Similarly, if an event encompasses a range of industries, and multipliers from a single industry are applied, the accuracy levels will diminish.

Regions and boundaries

The smaller or less defined a region and its boundaries, the less accurate the multiplier analysis will be. Similarly, the easier it is to move across boundaries, the less accurate the analysis will be. For example, at the national level, the multipliers will be very accurate as it is easy to determine the inputs and outputs crossing through the New Zealand borders.

Similarly, it would also be more accurate to determine a North Island/South Island split. As smaller regions without obvious geographic boundaries are selected, a higher level of assumptions needs to be made and the multipliers become less accurate. For example, an individual could work in the Auckland region, but live in the Waikato region and spend a large proportion of his/her recreation money in the Bay of Plenty region.

For any regional analysis the level of accuracy will have to be accepted. As a rule of thumb, the larger and more defined the region, the more accurate the analysis will be.