Measuring the Impact of Sport, Physical Activity and Recreation in Canada

2025

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CPRA ACPL

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Sport, physical activity, and recreation offer a wide range of benefits

Executive summary

The impact of sport, physical activity, and recreation (SPAR) on society is significant and may be categorized into four areas, each with an estimated economic value. These impacts, however, may be bi-directional; for example, SPAR can have a positive impact on health conditions, yet the presence of health conditions can negatively impact participation in SPAR.

In this report, the *economic* impact of SPAR amounted to $37.2B. In 2022, *health care* costs due to physical inactivity was estimated at $3.9B. The *social* impact of SPAR was estimated at $13.6B in 2020. Moreover, the *environmental* impact of SPAR was estimated at $42.5B in 2020.

SPAR has numerous other positive impacts on society that cannot be assigned an economic value. Overall, the positive effects of SPAR extend beyond its economic and measurable benefits, making it a valuable contributor to individual well-being and the overall betterment of society.

Economic impact

$37.2B

2022

Health impact

Direct cost **$3.9B**

Mortality cost **$36.9M**

2022

Social impact

$13.6B

2020

Environmental impact

$42.5B

2020

Context of the project

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Context

The Canadian Fitness and Lifestyle Research Institute (CFLRI) and the Canadian Parks and Recreation Association (CPRA) are two organizations committed to the quality of life of Canadians. CFLRI conducts research and compiles information on the physical activity and sports participation of Canadians to support population well-being. CPRA promotes public health through thought leadership and programming for organizations responsible for managing recreation and parks in Canadian communities. In short, **CFLRI and CPRA work together to promote sport, physical activity and recreation (SPAR) across Canada.**

The **direct economic impact** of SPAR on communities is significant: several hundred of thousands of jobs are supported across Canada related to sport and recreation, and billions of dollars are invested annually in the construction or renewal of infrastructure. In addition to these more easily quantifiable impacts, **the actual participation in SPAR generates other important benefits for individuals and communities in Canada**. The Canadian and global literature is rich in studies documenting **positive impacts of SPAR related to population health** (improved general population health, improved mental health, decreased chronic disease, improved productivity, etc.), **social benefits** (increased volunteerism, local and community development, national pride, etc.) **and environmental benefits** (green space benefits, greenhouse gas reductions, etc.).

CFLRI and CPRA wanted to conduct a study to demonstrate the extent of the social, health, environmental and economic (SHEE) impact associated with sport, physical activity and recreation that will ultimately be used to provide information to governments and other organizations.

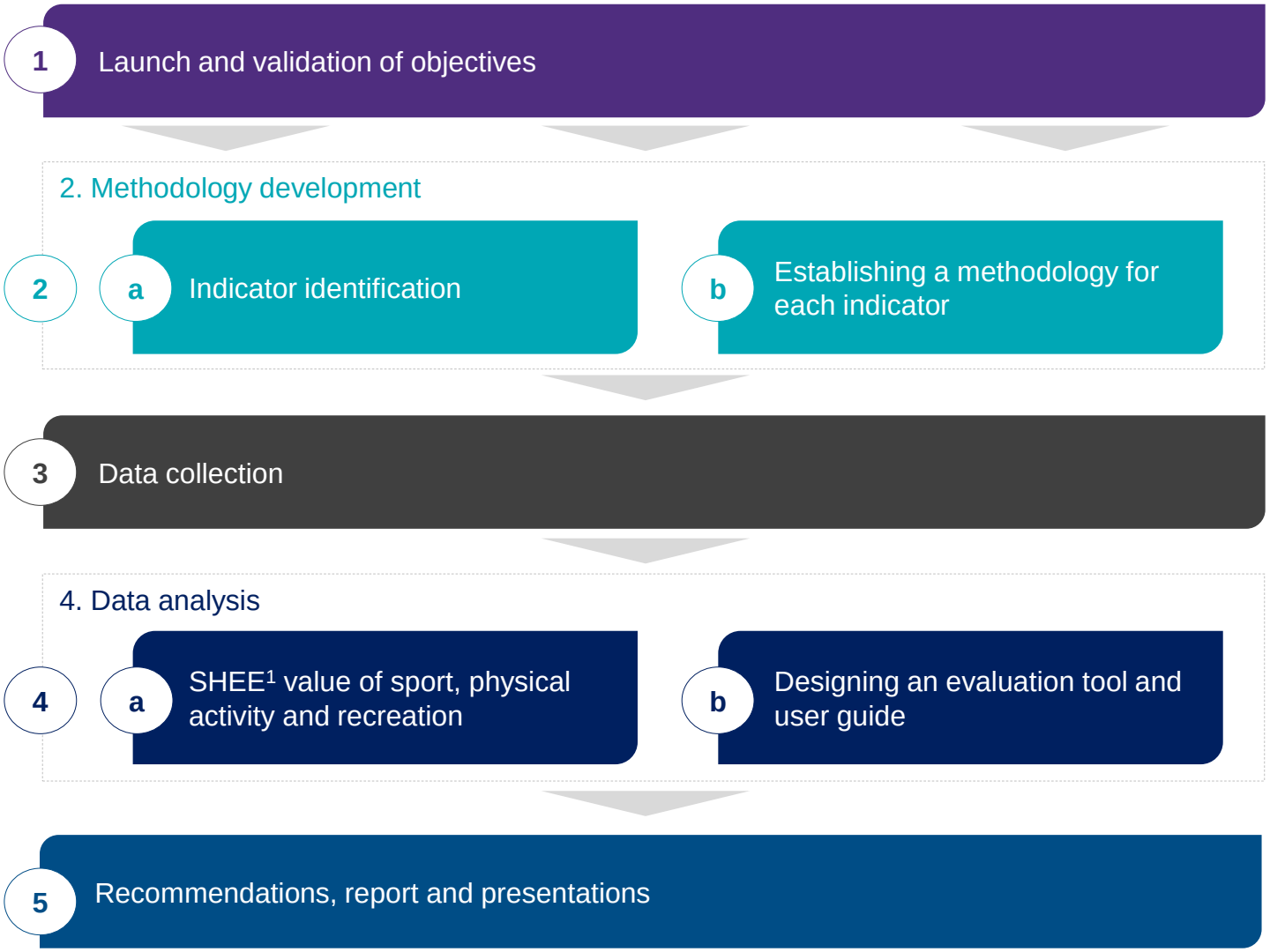
This report covers the same time period as described in the Measuring Impact foundational report, entitled The Price of Inactivity: Measuring the Powerful Impact of Sport, Physical Activity, and Recreation in Canada.

Project

It is in this context that CFLRI and CPRA have contracted RCGT to assist with the following objectives:

1. Identify indicators that will allow the evaluation of social, health, environmental and economic benefits;
2. Review the methodology and data sources to calculate the indicators;
3. Develop a dynamic tool to estimate the impact of SPAR and a guide for using the tool;
4. Summarize and present the results of the assessment of the impact of sport, physical activity and recreation in Canada.

A five-step framework



1. Social, health, environmental and economic (SHEE)

Methodology

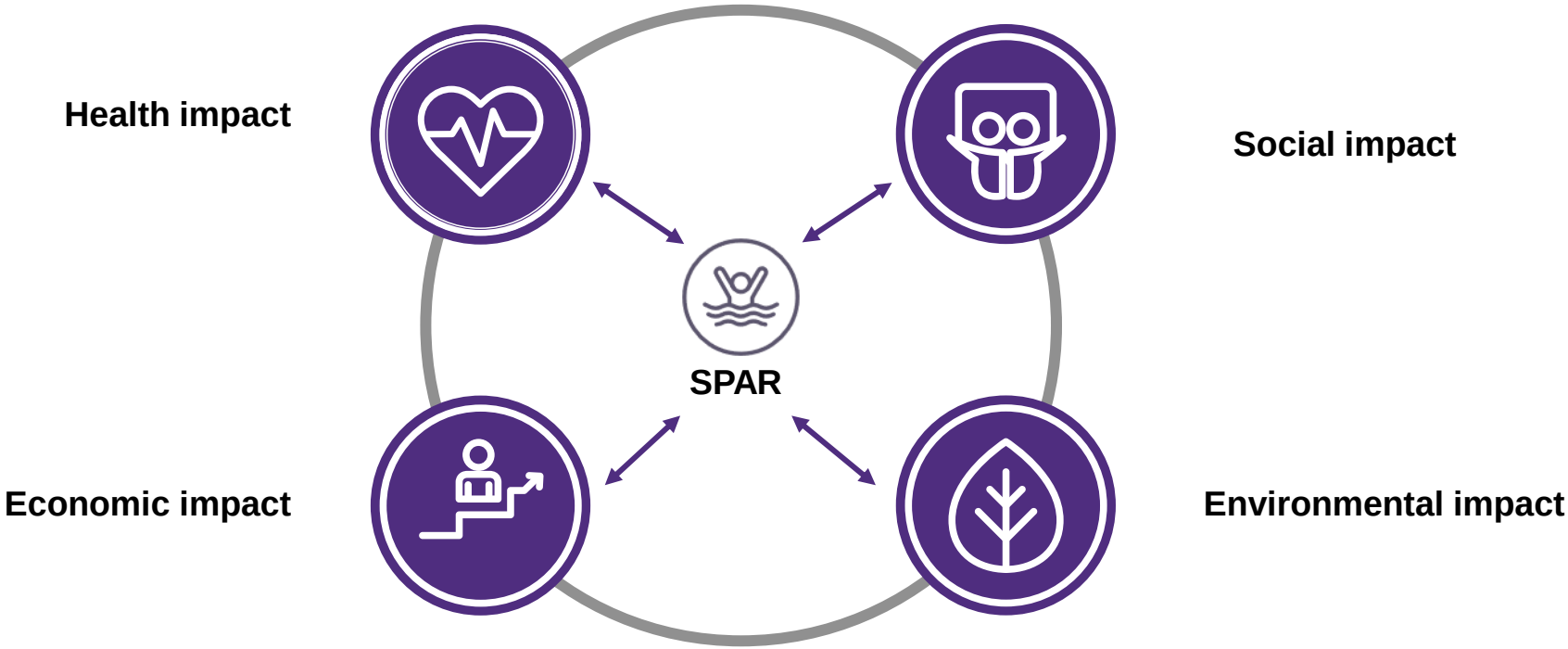
Four types of impacts from SPAR have been considered and analyzed

Types of impacts analyzed

To assess the impact of sport, physical activity, and recreation, data were summarized across four main categories: social, health, economic, and environmental.

Quantitative indicators are used to evaluate the impacts in each category, and monetary values were assigned, where possible.

Type of impacts included



Forty-eight indicators were chosen to evaluate the SHEE impact of sport, physical activity and recreation

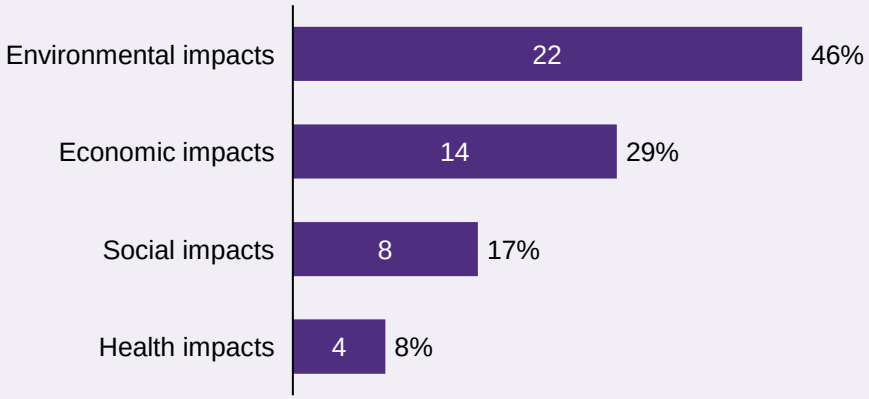
Indicator by type of impacts and analysis

In 2023, a total of 77 indicators were considered and analyzed to assess the impact of SPAR. However, after thorough evaluation, 29 indicators were removed due to a lack of data or the absence of a robust methodology in the analysis. The remaining 48 indicators have been selected to represent the impact of SPAR.

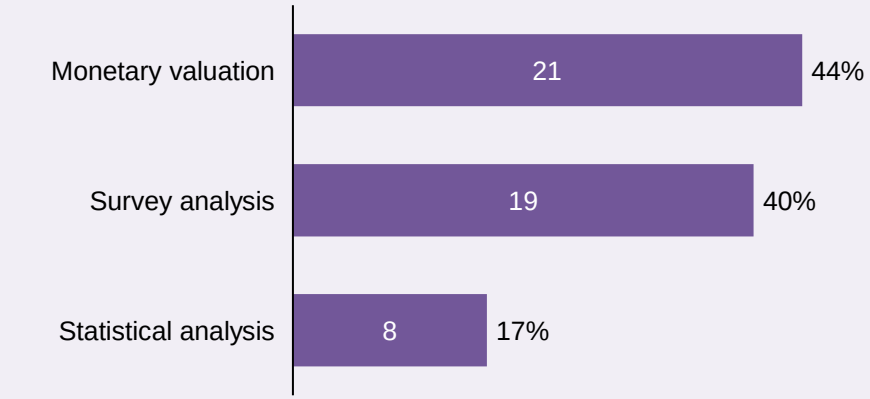
The **48 relevant indicators** are categorized into four types of impacts: social, health, economic and environmental impacts. Out of these indicators, 22 cover environmental impacts of SPAR, 14 reflect economic impacts, 8 represent social impacts, and 4 are related to health impacts.

To assess the indicators, three types of analyses were used: monetary valuation, survey analysis or statistical analysis. The monetary valuation accounts for 21 of the indicators, followed by survey analysis with 19 indicators and the statistical analysis with 8 indicators.

Number of indicators by type of impacts
N=48



Number of indicators by type of analysis
N=48



The relevant indicators have been divided into subcategories within each impact type

Indicator subcategories

Economic impacts

- Sport and recreation gross domestic product (GDP) proportion in the economy
- Contribution of sport and recreation to employment
- Value of contribution of SPAR to tourism
- Investment in community infrastructure

Health impacts

- Direct and indirect impact of SPAR related to health conditions and diseases
- Direct and indirect impact of SPAR related to mental health

Social impacts

- Value of unpaid activities
- Contribution to individual factors
- Contribution to community factors

Environmental impacts

- Impact of environmental factors
- Road injuries and safety
- Impact and usage of parks, green spaces
- Impact and usage of sport and recreation facilities
- Value of community infrastructure

The data used for this project have been collected from multiple sources

For this project, data collection relied on four primary sources: government sources, research articles, organizational data, and a CFLRI survey.

Government sources are a valuable data repository, providing extensive information relevant to this report. An advantage of these kinds of sources is that they regularly update their data, allowing for the possibility of updating the findings presented in this report.

Research articles also played a role in documenting some indicators. These articles, periodically published in countries similar to Canada, make it possible to apply the findings to the Canadian context. Organization data have also been incorporated into the analysis.

Findings from surveys provided useful information for this report. First, some analyses are based on a survey conducted by the CFLRI in February and March 2023. Additionally, survey results from organizations such as the Canadian Centre for Ethics in Sport (CCES) have also been valuable.

Government sources (Statistics Canada, Health Canada, etc.)

Research articles

Organizational data

Survey results

More on the methodology and limitations of this report

Methodology

Reputable data sources were identified for each data point used in the analyses. A methodology for data collection and analysis was developed for each indicator. In some cases, estimation techniques were applied to the data to better present the impacts of SPAR.

The data analysis strategy and subsequent findings varied by indicator type. For example, the methodology used for monetary calculations was complex and involved a large number of variables. The results presented were based on data obtained both through secondary sources and from primary data collection (survey results).

All findings are presented for Canada. Provincial and territorial results are presented in cases where the data were available.

Limitations

The analyses conducted for this report were based on the data and information accessible at the time of preparation. However, certain indicators, such as ambient water quality, could not be assessed due to a lack of data or relevant studies. In some cases, the precision of the obtained data was also limited, resulting in a reduced number of analyzed indicators.

One primary data source was annual data from government sources. In cases where such data were unavailable, reports or study data was used instead. It is important to note that updating the results of the report might be more challenging in these instances. It is anticipated, however, that this model will be revisited periodically to enrich the data and analysis when possible.

A total value of the impact for each area of focus was calculated; however, it should be noted that these totals may not be mutually exclusive as there is a possibility of double counting. Efforts were made to minimize this, but caution should be exercised when interpreting the findings.

Additional indicators may be added in the future to develop a more comprehensive understanding of the impact of SPAR.

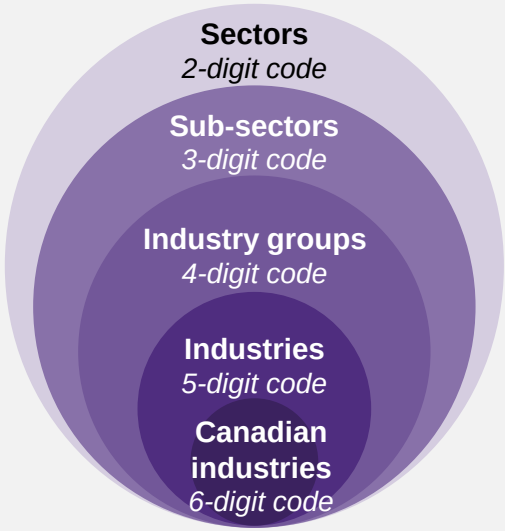
Data for the Northern regions (Northwest Territories, Nunavut and Yukon) were limited in availability for most indicators. However, they have been included, whenever possible.

Given the focus on participation and community-level activity, this analysis did not include gambling, media rights, professional sport ticketing, player transfers, certain retail sales (e.g., clothing), and limited impact of games and events.

Economic activities reflecting SPAR sectors

The **North American Industry Classification System (NAICS)** is the classification system of industries used in Canada, the United States and Mexico. It provides a common definition of the industrial structure across North America, and it ensures a common statistical framework to facilitate the analysis of the three economies. NAICS is based on supply-side or production-oriented principles to ensure that industrial data can be assigned to a sector.

All 922 Canadian industries are grouped into 20 NAICS sector groups. Each sector has a two-digit code assigned to it. As the economic activity becomes more specific, the code gains additional digits. Hence, the Canadian industries have six digits, which is the most precise code possible.



SPAR-related economic activities are mostly included within the arts, entertainment, and recreation NAICS sector. More precisely, SPAR's economic activities are represented by the industry group named *Other amusement and recreation industries;* the NAICS code for this industry group is 7139. SPAR-related economic activities are also in the industry of *Athletic instruction* (NAICS 61162) and the industry *Nature parks and other similar institutions* (NAICS 71219).

Since industrial data published by Statistics Canada are presented mostly by sectors, sub-sectors, and industry groups, the economic analysis is based only on the industry group *Other amusement and recreation industries* (NAICS 7139).

The industry groups for the industries *Athletic instruction* and *Nature parks and other similar institutions* were too broad to be included in the SPAR-related economic activities.

Sources: Statistics Canada (NAICS 2022 V.1); RCGT analysis.

Other amusement and recreation industries (OARI) description

As mentioned, the economic analysis involved data from the industry group *Other amusement and recreation industries.* This industry group includes six industries and each of them includes at least one Canadian industry. Within the 'Other amusement and recreation industries', there are three Canadian industries.

The structure of the industry group *OARI* is presented below.

Industries and Canadian industries included in the industry group *Other amusement and recreation industries*

NAICS 2022 version 1.0

Code	*Industries*	*Canadian Industries*
71391	Golf courses and country clubs	• Golf courses and country clubs
71392	Skiing facilities	• Skiing facilities
71393	Marinas	• Marinas
71394	Fitness and recreational centres	• Fitness and recreational centres
71395	Bowling centres	• Bowling centres
71399	Other amusement and recreation industries	• Sports clubs, teams and leagues performing before a non-paying audience • Other sports facilities (dance halls, curling rinks, etc.) • All other amusement and recreation industries (outdoor adventure, fishing guide, etc.)

The abbreviation OARI will be used in this report to identify the industry group *Other amusement and recreation industries.*

Sources: Statistics Canada; RCGT analysis.

Economic impacts

SPAR generates significant economic activity in various sectors

Economic impact

The **sport tourism value** amounted to

$7.4B in Canada in 2019

$4.1B from domestic visitors and
$3.3B from international visitors

In 2022, the **retail trade value for SPAR equipment** was **$23.3B**

From athletic footwear	***$2.7B***
From sporting equipment	***$8.3B***
From recreational vehicles	***$12.3B***

In 2022, SPAR had an estimated average annual **economic impact of $37.2 billion** in terms of GDP

	Type of impact		
	Direct	***Indirect***	***Total***
From amusement and recreation	$5.4B	$3.4B	$8.8B
From sport	$6.7B	*Not available*	$6.7B
From retail sales	$14.6B	$6.9B	$21.5B
Total	**$26.9B**	**$10.3B**	**$37.2B**

Amusement and recreation industries **operating profit margin** in 2022 was

9.7%

SPAR activities impact employment opportunities, revenue, operational cost management, and tourism.

SPAR activities have multiple impacts on the Canadian economy.

Economic impact indicators have been grouped into four categories:

1. Economic activities (revenue, expenditures, GDP, employment)
2. Tourism
3. Household spending
4. Retail sales

The SPAR sector generated $9.6B in operational revenue in 2021 in Canada

SPAR value

Operational revenue has been used to represent the SPAR sector value. The sector *Other amusement and recreation industries (OARI)* is composed of four subsectors: golf courses and country clubs, skiing facilities, fitness and recreational sports centres, and all other amusement and recreation industries.

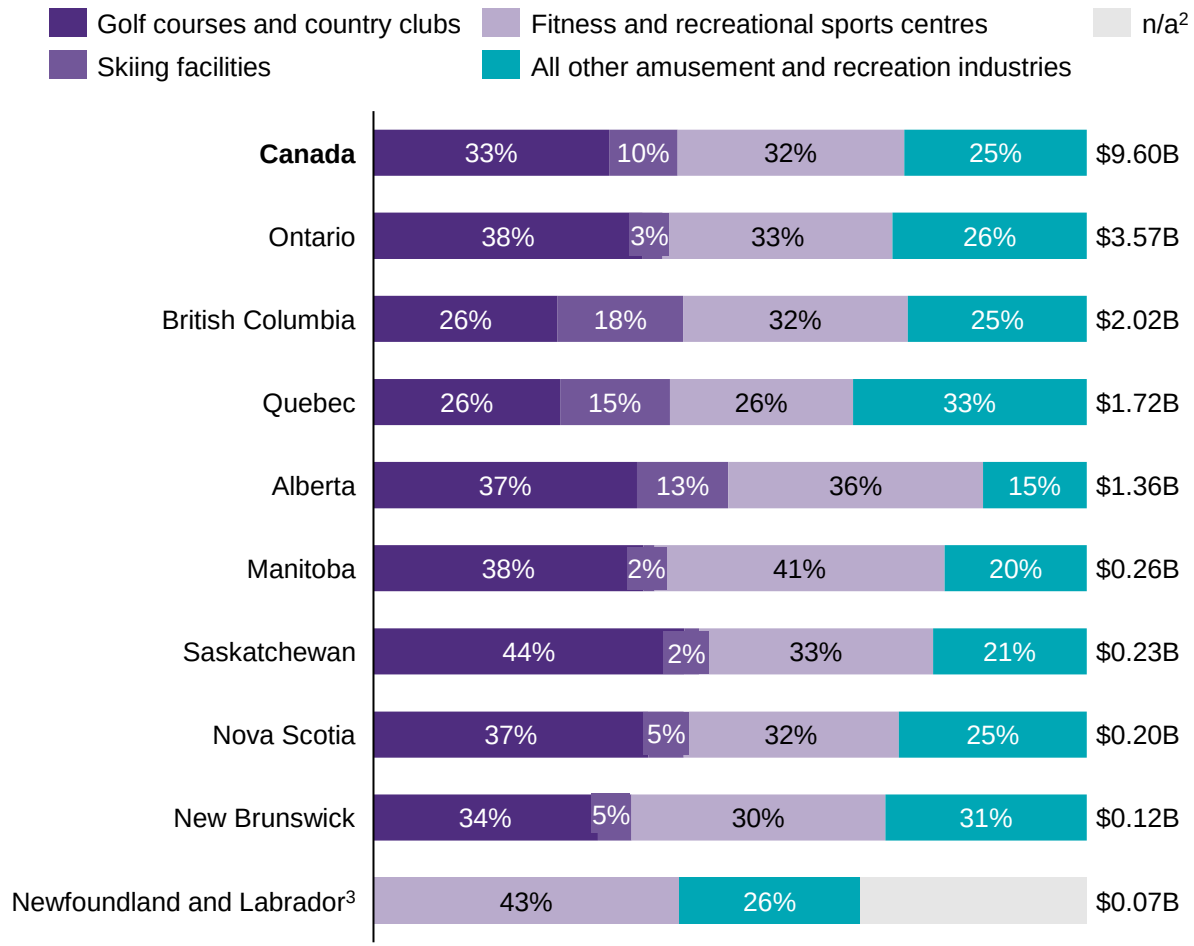
The largest revenue-generating subsector in Canada is golf courses and country clubs, followed by fitness and recreational sports centres.

The provinces of Ontario, British Columbia and Quebec generated the most value in the recreation industry with $3.6B, $2.0B and $1.7B, respectively.

The subsector that rated the highest varied by province; however, the golf and fitness subsectors generally rated highly, regardless of region.

Chart 1: SPAR sector value by province[1]

Canada, Provinces, operational revenue in $B, OARI, 2021



Sources: Statistics Canada (Table: 21-10-0057-01); RCGT analysis.

1. Data for Yukon, Nunavut, Northwest Territories , and Prince Edward Island are not available or incomplete. 2. n/a = not available. 3. Data on golf courses and country clubs and on skiing facilities in Newfoundland and Labrador are not available.

The operational revenue of the SPAR sector sits at $12.5B in 2022

SPAR value

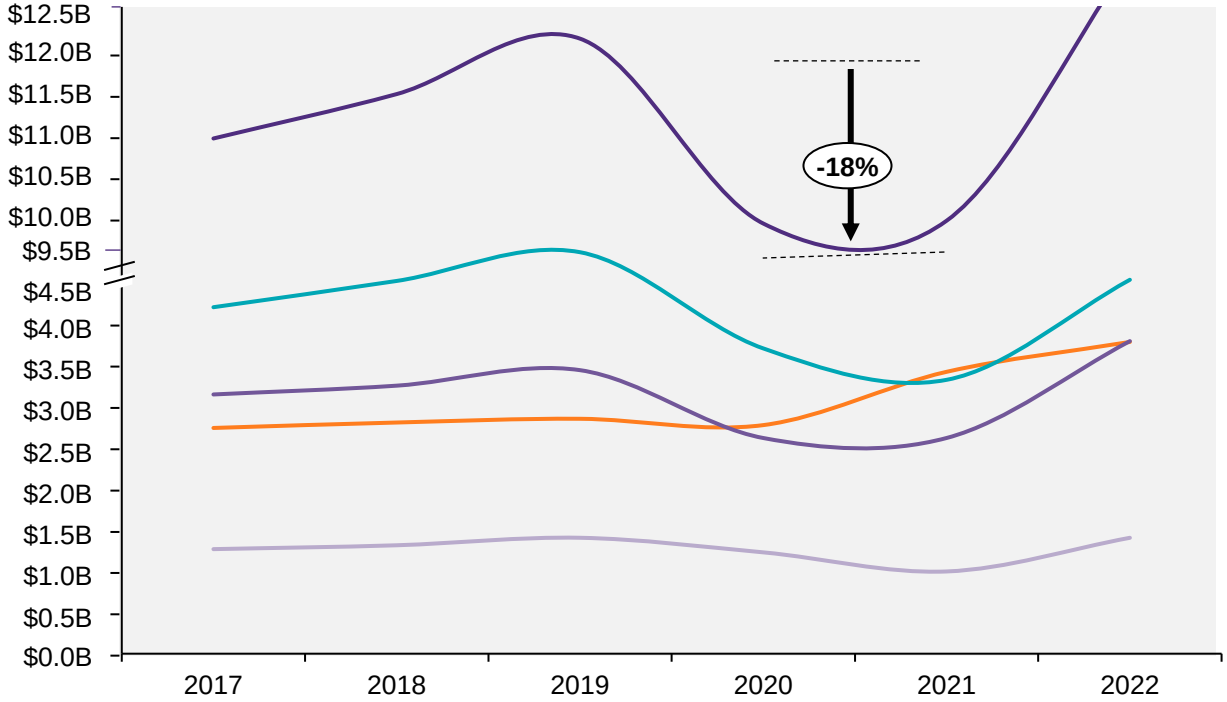
The operational revenue of the SPAR sector (other amusement and recreation industries) declined sharply (-18%) in 2020 due to the COVID-19 pandemic and rebounded to above pandemic levels in 2022.

From 2017 to 2021, golf courses and country clubs were the only sub-sectors that demonstrated growth in operational revenue, with an average annual growth rate (AAGR) of 6%. In contrast, all other subsectors experienced a negative AAGR during this period.

As of 2022, however, all sub-sectors showed growth.

Chart 2: Trends in the SPAR sector value in Canada

Canada, operational revenue in billions of dollars ($B), OARI, 2022



	AAGR (2017-2021)	AAGR (2017-2022)
Total	- 2%	+4%
Golf courses and country clubs	+6%	+7%
Skiing facilities	- 6%	+2%
Fitness and recreational sports centres	- 6%	+2%
All other amusement and recreation industries	- 4%	+4%

Sources: Statistics Canada (Table: 21-10-0057-01); RCGT analysis.

The SPAR operating profit margin reached 9.7% in 2022

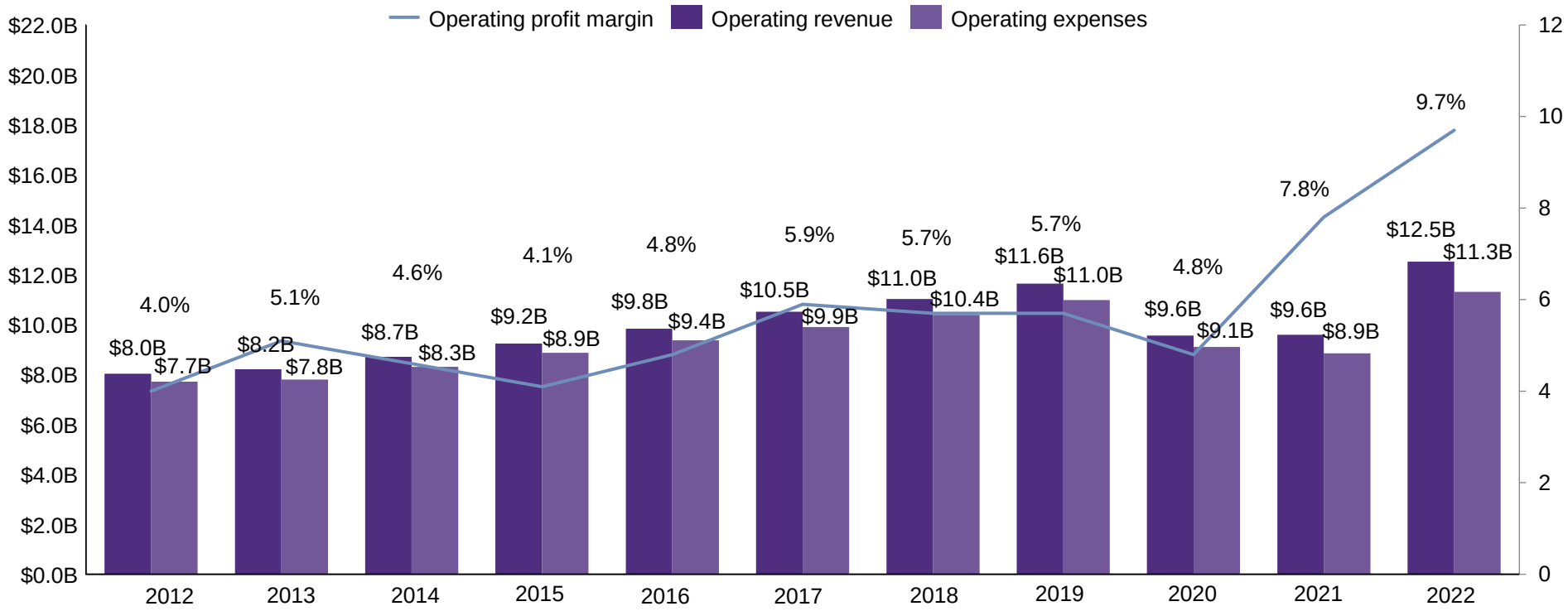
SPAR operating profit margin

The operating profit margin is mainly derived from the difference between operating revenue and operating expenses expressed as a percentage.

Despite lower operating revenue and expenses in 2021 compared to previous years (2016 to 2020), the SPAR operating profit margin experienced a significant increase in 2021 and 2022.

Chart 3: Trends in SPAR operating profit margin

Canada, operating expenses and revenue in billions of dollars ($B), OARI, 2012-2022



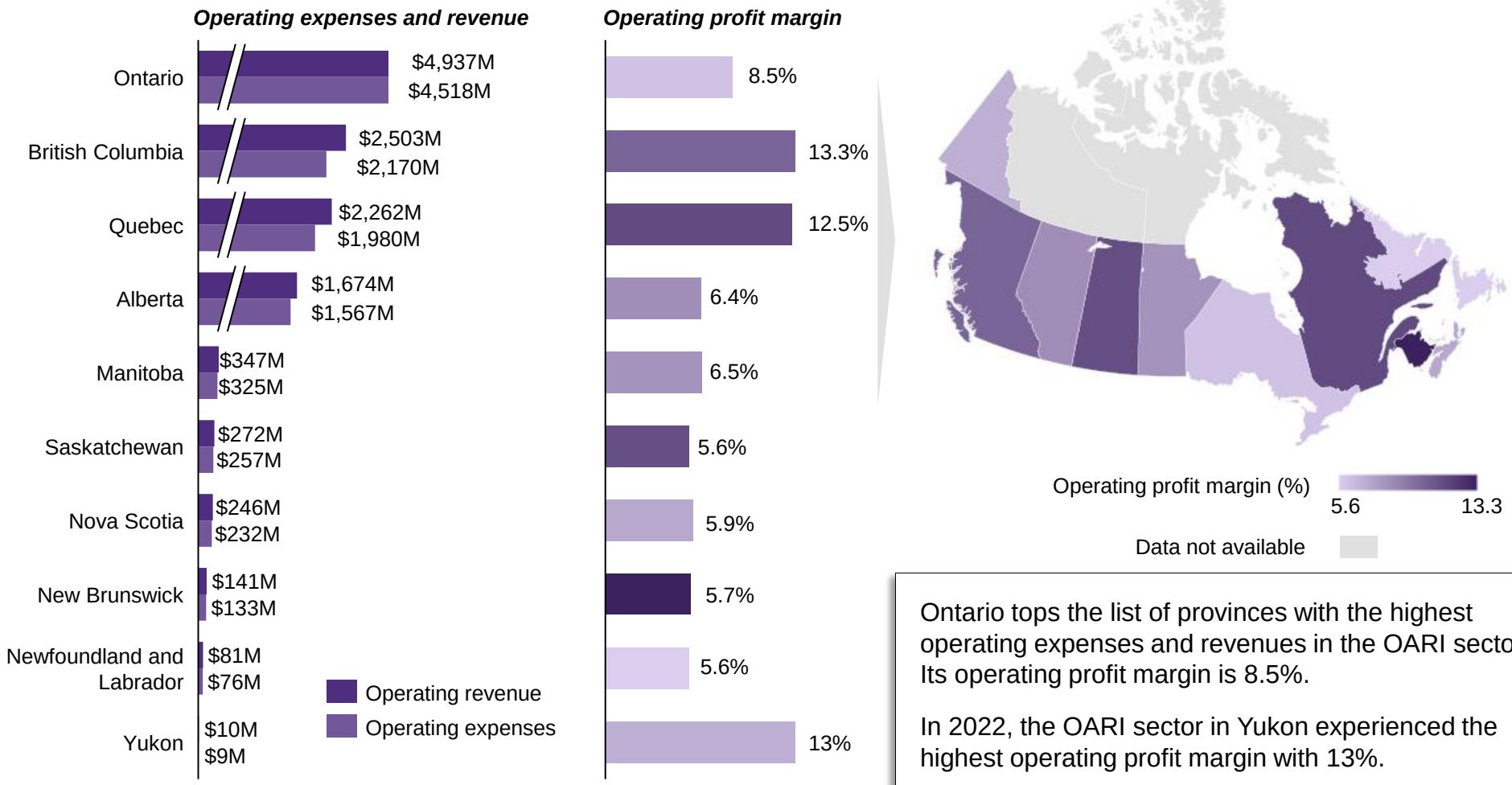
Sources: Statistics Canada (Table: 21-10-0057-01); RCGT analysis.

3 out of the 10 regions exhibit a higher operating profit margin than the Canadian average

SPAR operating profit margin by province and territory

Chart 4: Operating profit margin by province and territory

Provinces and territories, operating expenses and revenue in millions of dollars ($M), operating profit margin in %, OARI, 2022



Ontario tops the list of provinces with the highest operating expenses and revenues in the OARI sector. Its operating profit margin is 8.5%.

In 2022, the OARI sector in Yukon experienced the highest operating profit margin with 13%.

Sources: Statistics Canada (Table: 21-10-0057-01); RCGT analysis.

1. Data for Prince Edward Island, Nunavut and Northwest Territories are not available.

Ski facilities and golf courses and country clubs are among the most profitable industries within the OARI sector in 2022

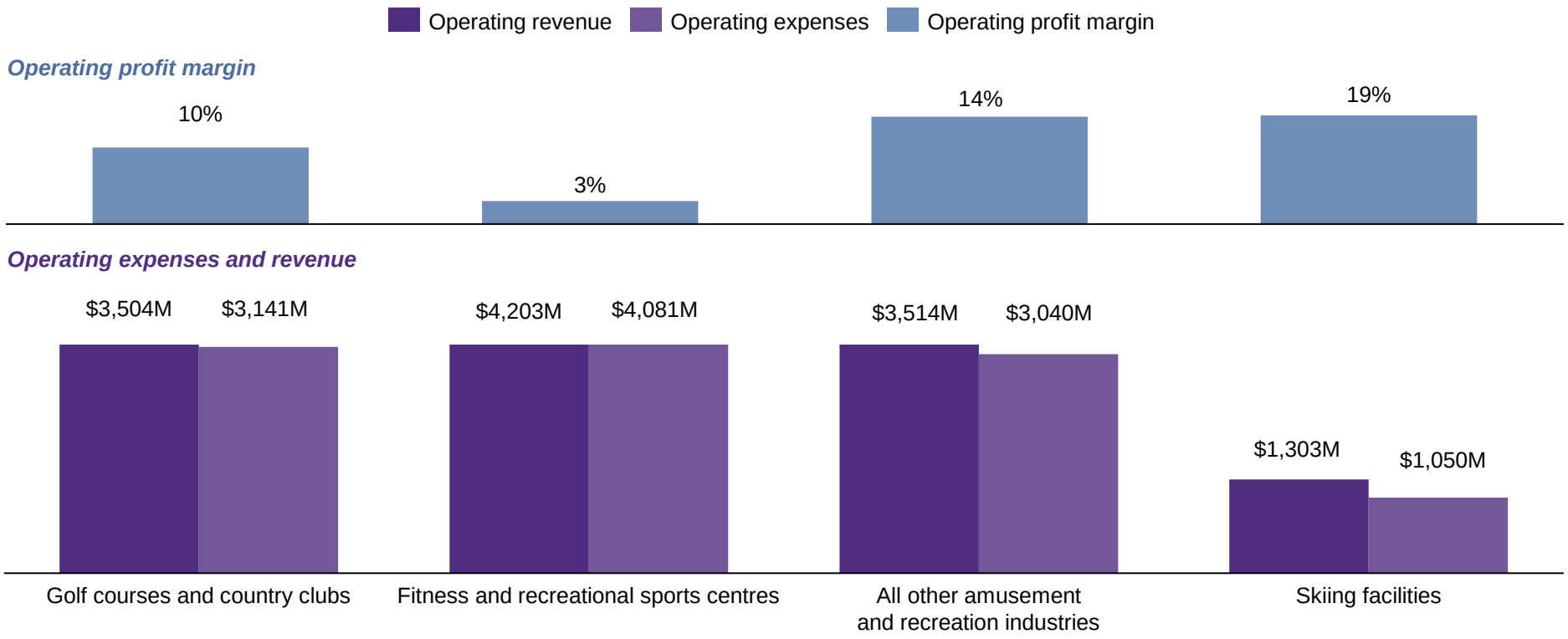
SPAR operating profit margin by industry

In 2022, fitness and recreational sports centres generated over $4.2 billion in operating revenue. However, due to slightly higher operating expenses, they experienced a lower operating profit margin of 3%.

On the other hand, skiing facilities, golf courses and country clubs and all other amusement and recreation industries achieved an operating profit margin of 10% or higher in 2022.

Chart 5: Operating profit margin by OARI industry

Operating expenses and revenue in millions of dollars ($M), operating profit margin in %, OARI industries, 2022



Sources: Statistics Canada (Table: 21-10-0057-01); RCGT analysis.

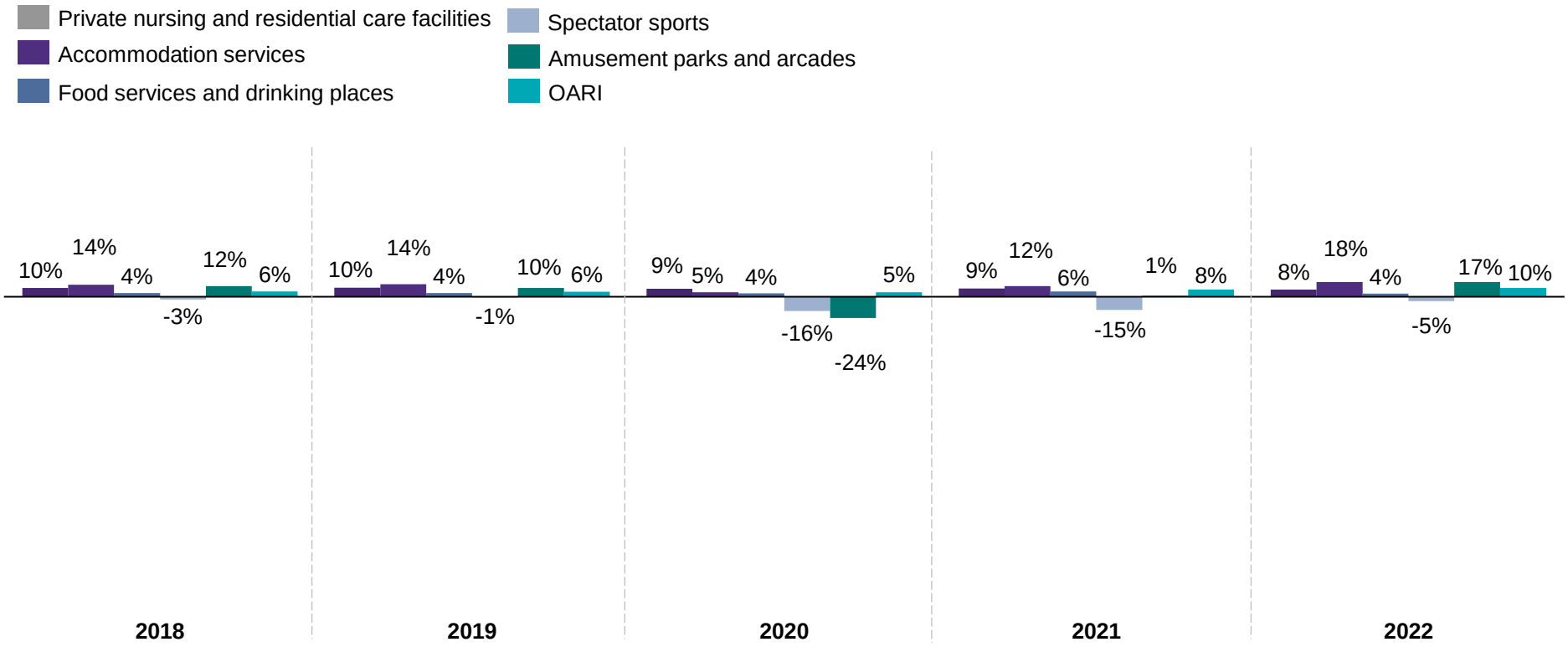
The OARI sector has consistently demonstrated profitability over time

Operating profit margins comparison

The OARI sector remained profitable amid pandemic-related challenges and was more profitable than food services and drinking places as well as spectator sports and event promoters since 2018.

Chart 6: Comparison of operating profit margins among sectors

Canada, operating profit margin in %, 2018-2022



Sources: Statistics Canada (Table: 13-10-0102-01, Table: 21-10-0171-01, Table: 21-10-0169-01, Table: 33-10-0102-01 and Table: 21-10-0057-01); RCGT analysis.

SPAR has direct and indirect economic impacts within each province/territory

Amusement and recreation economic impacts

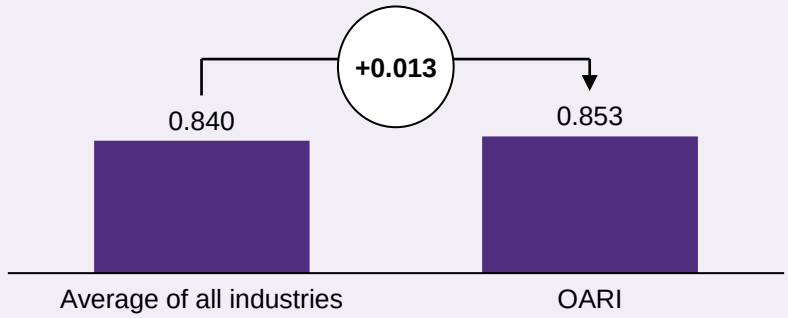
Amusement and recreation's economic impacts are presented in terms of GDP generated by the sector's activities. The analysis identifies the direct and indirect economic impact of activities in the Amusement and recreation sector. The direct economic impact refers to the immediate effect resulting from a specific activity. On the other hand, an indirect impact represents the ripple effects caused by the initial economic activity.

The Amusement and recreation impacts are the highest in the provinces of Ontario, British Columbia, and Quebec. It generated $3.5B of GDP in Ontario, $1.7B in British Columbia and $1.6B in Quebec.

The direct impact accounts for 52% of the GDP impacts in Canada in 2021.

Compared to the average of all industries, the Amusement and recreation sector generates slightly more GDP per dollar of output (+0.013).

The provided input-output multipliers demonstrate the sector's economic interconnections.



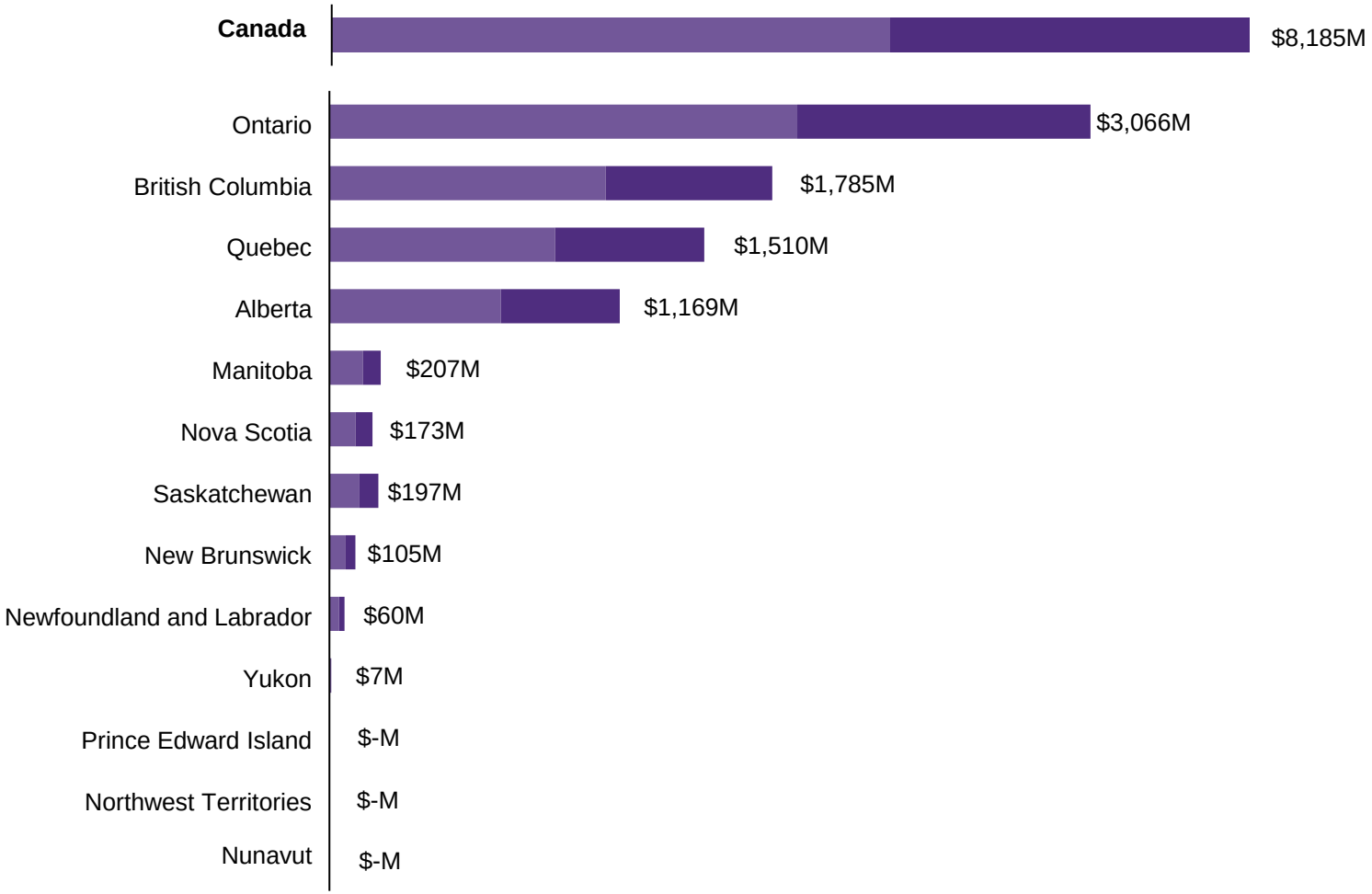
Sources: Statistics Canada (Table: 36-10-0487-01, Table: 18-10-0005-01, Table: 36-10-0595-01, Table: 36-10-0594-01 and Table: 21-10-0057-01); RCGT analysis.

Amusement and recreation generated more than $8B in GDP in 2021

Amusement and recreation economic impacts

Chart 7: Amusement and recreation economic impacts

Provinces and territories, GDP impact in millions of dollars ($M), direct and indirect impacts, OARI, 2021



	Direct impact	Indirect impact
Canada	$4,980M	$3,205M
Ontario	$1,884M	$1,181M
British Columbia	$1,113M	$671M
Quebec	$908M	$602M
Alberta	$690M	$479M
Manitoba	$134M	$73M
Nova Scotia	$105M	$68M
Saskatchewan	$119M	$78M
New Brunswick	$66M	$39M
Newfoundland and Labrador	$38M	$23M
Yukon	$4M	$3M
Prince Edward Island	$-M	$-M
Northwest Territories	$-M	$-M
Nunavut	$-M	$-M

Sources: Statistics Canada (Table: 36-10-0595-01, Table: 36-10-0594-01 and Table: 21-10-0057-01), 2023; RCGT analysis.

In 2022, Canada's sports GDP amounted to $6.7 billion, accounting for 10% of the total culture and sport GDP

Sports GDP

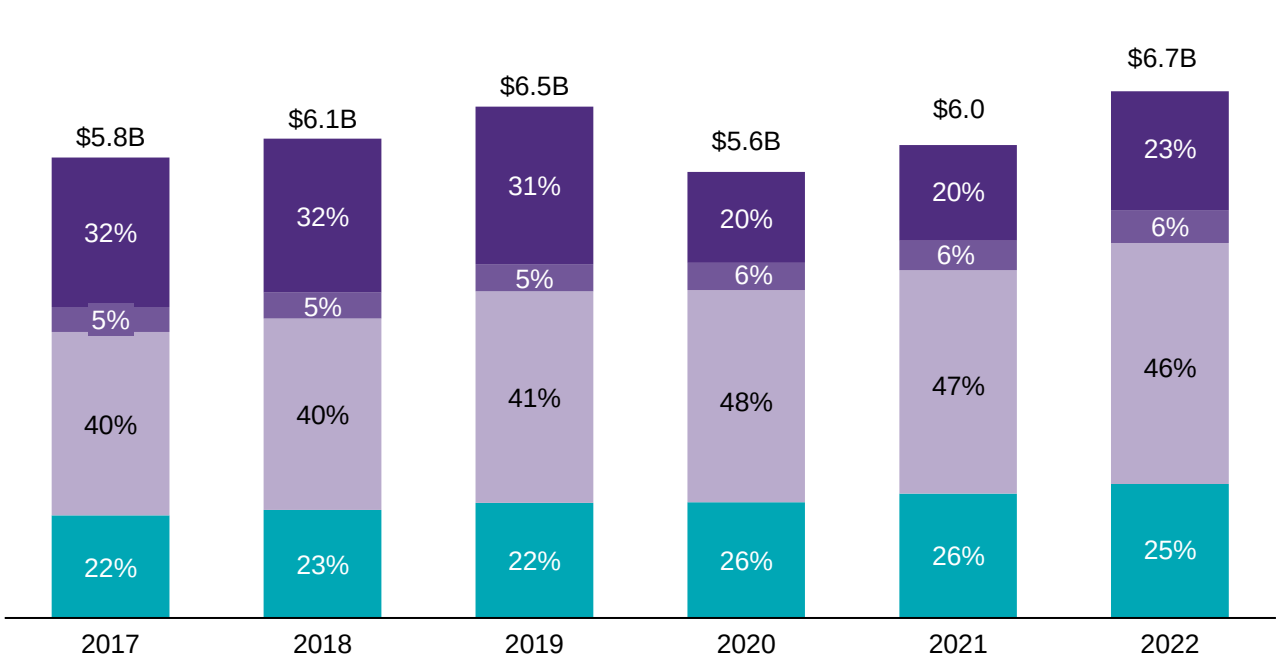
Sports GDP is the value added that is related to the production of sports goods or activities and across the economy, regardless of the producing industry. It does not represent the same sectors as the *OARI*.[1]

With the exception of a decline in 2020, Canada's sports GDP has shown relative stability since 2017. Over this period, education and training have consistently represented the largest share of sports GDP, accounting for approximately 40% to 48%. Organized sports follows closely behind, making up between 20% and 32% of sports GDP.

In 2022, sports GDP constituted 10% of the total culture and sport GDP. It also amounted to 0.23% of the total GDP in 2022.

Chart 8: Trends in sports GDP by category

Canada, total in billions of dollars ($B), in % of sports GDP, annual average growth rate (AAGR) between 2017 and 2022



	AAGR
Organized sports	-4%
Informal sports	5%
Education and training	6%
Governance, funding and professional support	5%

***Sports GDP** accounts for*

10% of **total culture and sport GDP** in 2022

0.23% of **Canada's global GDP** in 2022

Sources: Statistics Canada (Table: 36-10-0652-01, Table: 36-10-0452-01 and Table: 36-10-0222-01); RCGT analysis.; 1 Statistics Canada, https://www150.statcan.gc.ca/n1/pub/13-607-x/2016001/1249-eng.htm

Between 2012 and 2021, Canada's sports GDP remained stable around $6 billion

Evolution of sports GDP

During the period of 2012 to 2021, Canada's sports GDP maintained relative stability while the overall GDP of the country experienced growth. As a result, the ratio of sports GDP to the overall GDP decreased. In 2012, sports GDP accounted for 0.31% of the overall GDP, whereas in 2021, it was 0.24%. This represents a decrease of 0.07 percentage points.

Chart 9: Trends in sports GDP

Canada, Sports GDP in billions of dollars ($B), 2012-2021

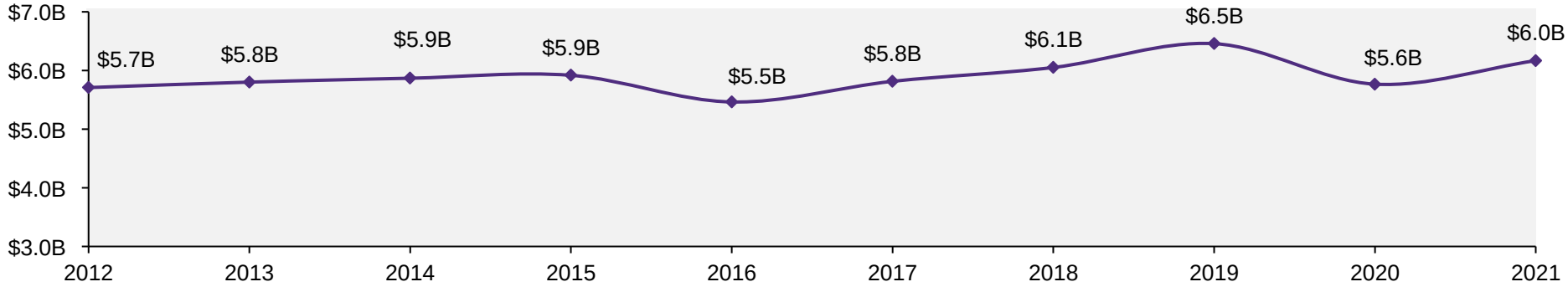
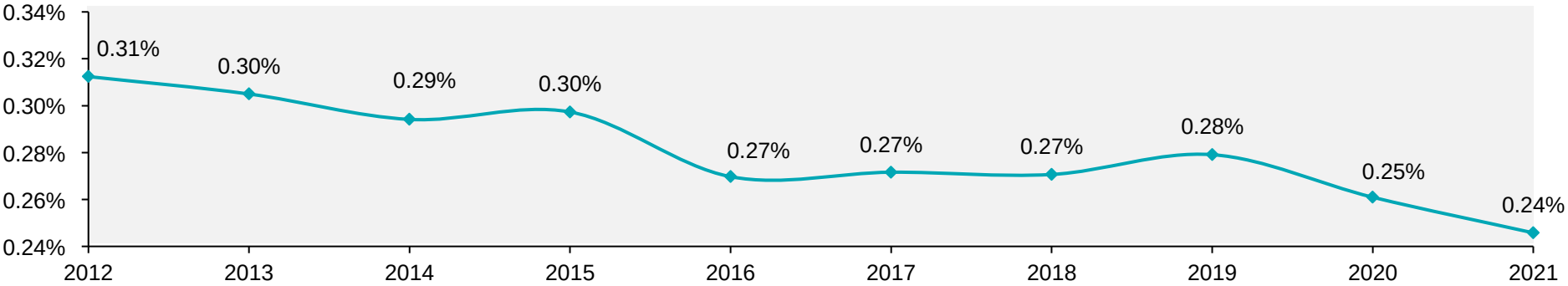


Chart 10: Trends in sports GDP as part of overall GDP

Canada, sports GDP in % of overall GDP, 2012-2021



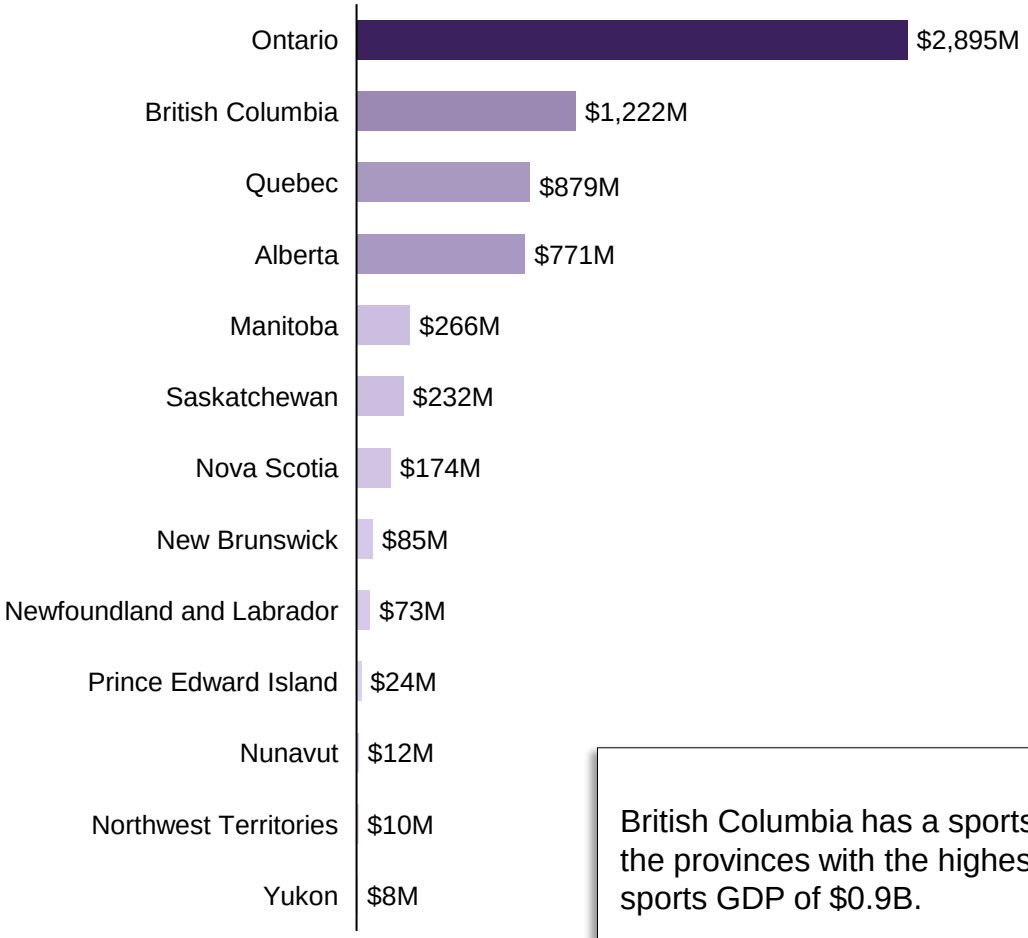
Sources: Statistics Canada (Table: 36-10-0222-01, Table: 36-10-0452-01 and Table: 36-10-0652-01); RCGT analysis.

Ontario's sports GDP stood out among the Canadian provinces/territories, reaching a total of $2.9 billion in 2022

Sports GDP by province/territory

Chart 11: Sports GDP by province and territory

Provinces and territories, Sports GDP in millions of dollars ($M), 2022



British Columbia has a sports GDP of $1.2B which places it in second place among the provinces with the highest sports GDP in 2022. Quebec is in third place with a sports GDP of $0.9B.

Sources: Statistics Canada (Table: 36-10-0452-01); RCGT analysis.

The number of jobs in the SPAR sector reached its peak in 2019, surpassing 260,000 jobs

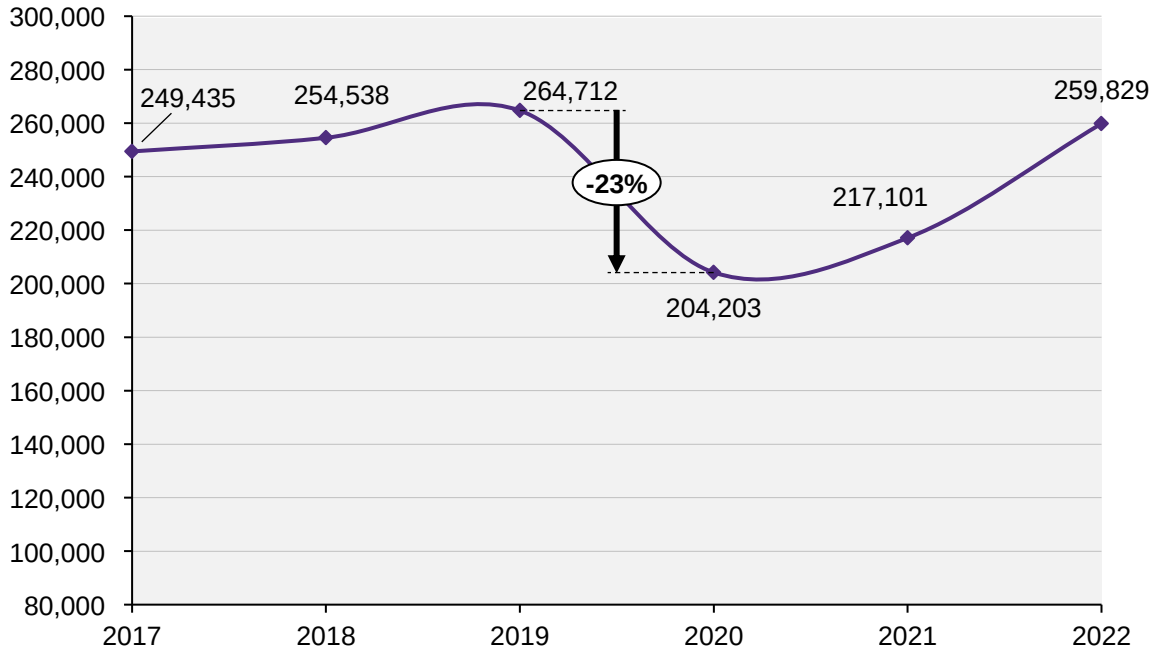
Employment related to SPAR

In 2020, employment in the SPAR sectors (OARI and sport industry combined) decreased to about 204,200 jobs. However, since then, the sectors have shown a recovery with an upward trend in job numbers. By 2022, the number of jobs had rebounded and reached 259,829, indicating a positive growth trajectory. The employment values may be an underestimate as the public service category of NAICS was not included in this analyses.

In 2022, hourly earnings averaged $20.18 for hourly paid employees and $33.61 for yearly paid employees in the OARI sector in Canada.

Chart 12: Trends in the number of jobs in the SPAR sectors in Canada

Canada, OARI and Sport industry combined, 2017-2022



Average hourly earnings in the OARI

Salaried employees have a higher hourly wage than those paid by the hour. Data are only available for the provinces presented below.

Chart 13: Average hourly earnings in the OARI sector

Provinces, OARI, 2022

Sources: Statistics Canada (Table: 14-10-0205-01, Table: 14-10-0202-01, Table: 36-10-0652-01 and Table: 14-10-0209-01); RCGT analysis.

The SPAR sector in Canada experienced a slight increase in jobs between 2017 and 2022

The average annual growth rate (AAGR) for jobs in the OARI between 2017 and 2022 was calculated to be 0.3%. In 2017, there were 156,840 employed individuals in the OARI, which increased to 159,374 by 2022.

However, data for the provinces of Newfoundland and Labrador, Quebec, and Manitoba was not available for 2022, so the AAGR could not be calculated for these provinces.

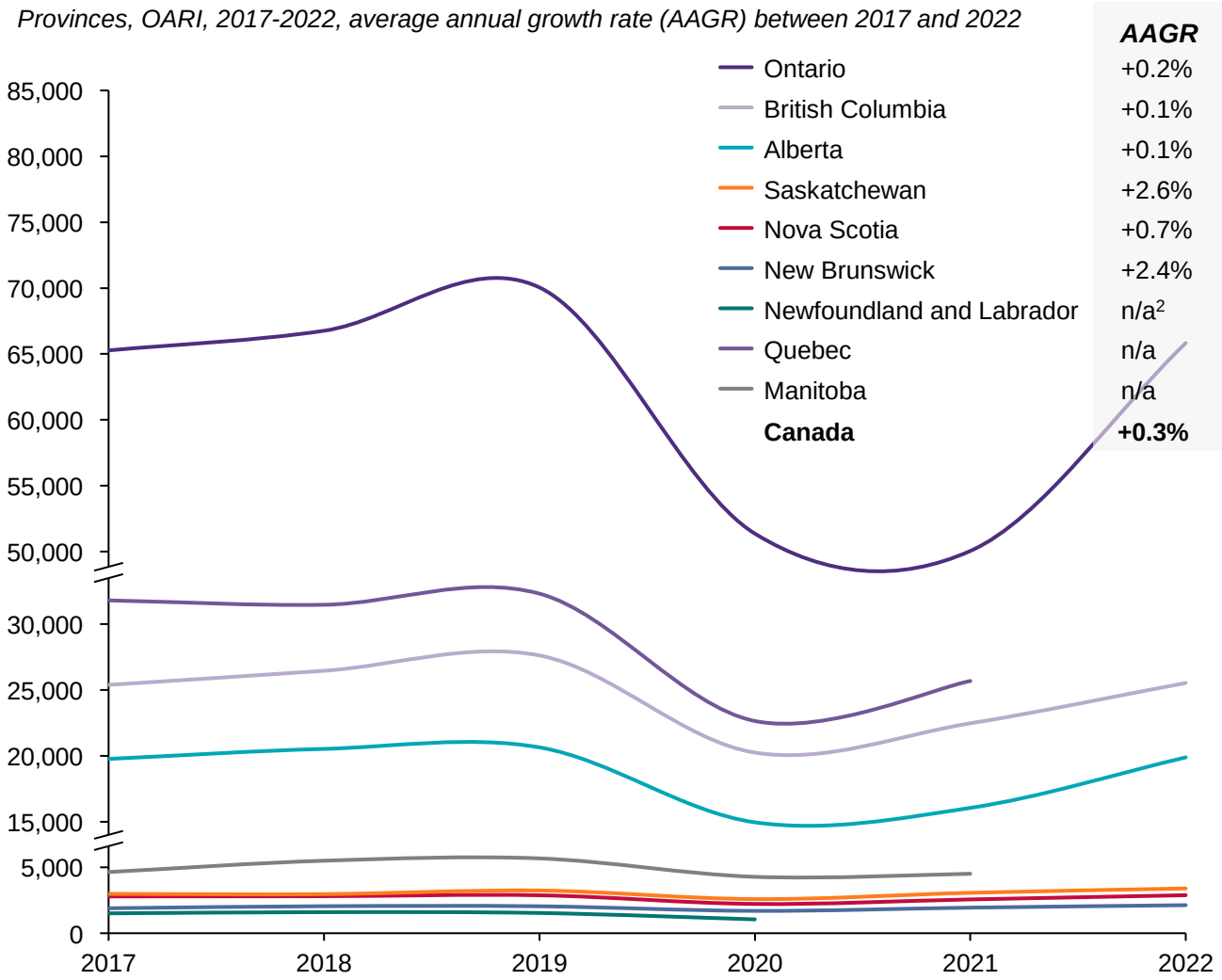
Among the provinces with available data, Ontario had the highest employment in the OARI, with 65,828 jobs in 2022.

When considering the growth rate over this period, Saskatchewan had the highest AAGR at 2.6%.

It is important to note that the data provided only reflect jobs in the *Other amusement and recreation industries*. Additionally, the COVID-19 pandemic significantly impacted employment numbers, which may have affected the average annual growth rate.

Chart 14: Number of jobs and average annual growth rate in OARI[1]

Provinces, OARI, 2017-2022, average annual growth rate (AAGR) between 2017 and 2022



Sources: Statistics Canada (Table: 14-10-0202-01); RCGT analysis.

1. Data was not available for Prince Edward Island, Yukon, Nunavut and the Northwest Territories. *2. n/a for not available.*

The sport tourism value in Canada reached $7.4B in 2019

Tourism dollars related to SPAR

In 2019, sport tourism in Canada generated significant spending, with domestic visitors contributing $4.1 billion (56%) and international visitors contributing $3.3 billion.

The sport tourism value varies by region. Ontario led in sport tourism revenue with $2.5 billion, and domestic visitors accounted for 57% of spending in the province.

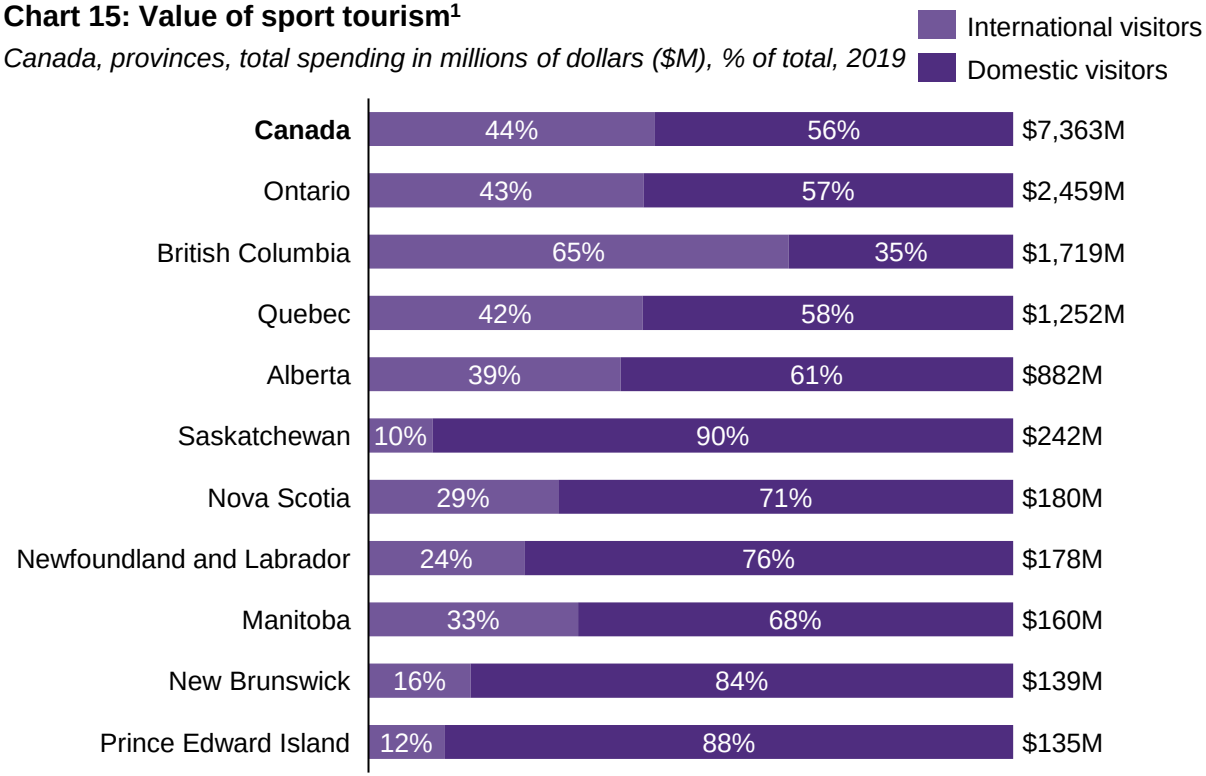
Whereas domestic visitors provide a greater contribution to sport tourism in most provinces, international visitors account for more spending in British Columbia.

Sport tourism attracted a total of 15.9M visitors in 2019. This consists of day, overnight, and international visitors. Of those, 14.4M made a domestic trip. For most of them (9.3M), it was a same-day trip. A total of 1.4M international visitors came to Canada for a sporting event, of which 739,000 were from the USA and 746,000 from overseas.

Visitor spending mainly focused on accommodations, food and beverages, vehicle costs, and sport/recreation activities.

Chart 15: Value of sport tourism[1]

Canada, provinces, total spending in millions of dollars ($M), % of total, 2019



Visitor statistics

14.4M domestic trips *(9.3 million same-day and 5.1 million overnight)* + **1.4M** international visitors *(739,000 USA and 746,000 overseas)* = **15.9M** visitors *(Same-day, overnight, USA, international)*

Sources: 2019 Sport Tourism Visitor Impact Report, Sport Tourism Canada, 2021; RCGT analysis.

1. Data were not available for Yukon, Nunavut and the Northwest Territories.

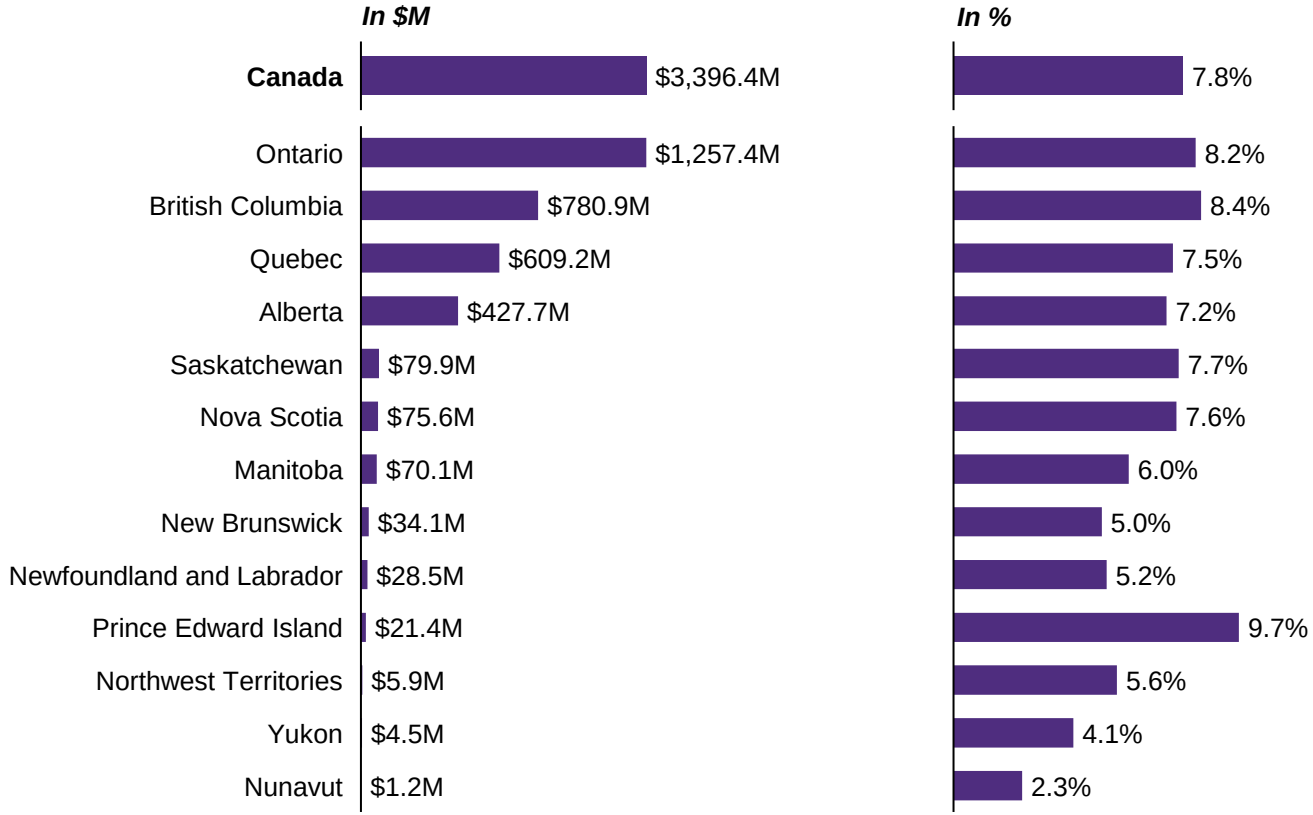
Recreation and entertainment tourism contributed 7.8% to the total tourism GDP, amounting to $3.4B in 2019

Tourism GDP and jobs related to recreation and entertainment

It is also possible to look at the contribution of recreation and entertainment while visitors are travelling. Although “recreation and entertainment” may include some passive activities, examination of this category allows one to explore the relative contribution and value of this category in comparison to other essential categories of tourism, such as food and beverage or accommodations expenses. More than the third of recreation and entertainment tourism GDP came from Ontario, with a total of $1.3B. It represents 8.2% of the province’s total tourism GDP. The province with the highest share of recreation and entertainment tourism GDP in the total tourism GDP is Prince Edward Island.

Chart 16: Recreation and entertainment[1] GDP generated by tourism

Canada, provinces and territories, in millions of dollars ($M), % of total tourism GDP, 2019



1. Recreation and entertainment includes activities from Amusement parks and arcades (NAICS 7131) and Other amusement and recreation industries (NAICS 7139)

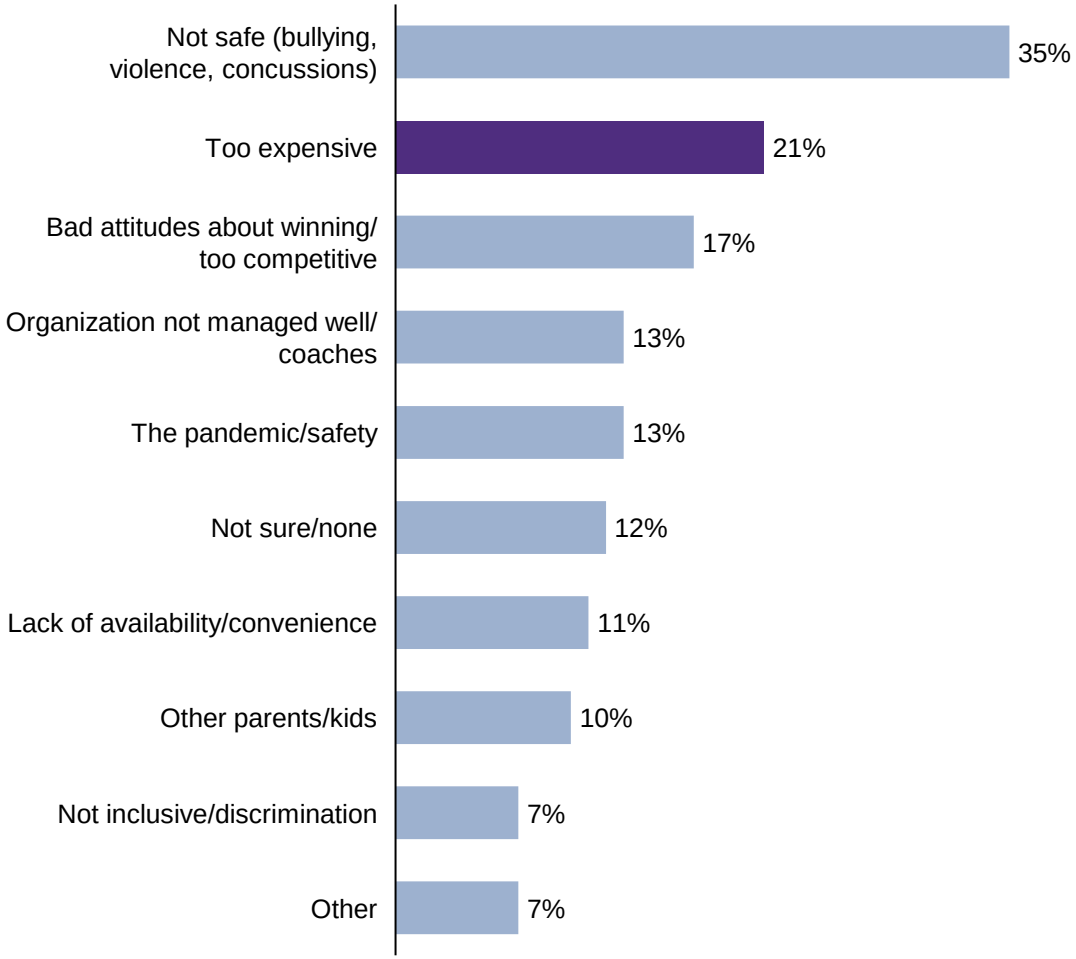
Sources: Statistics Canada (Table: 24-10-0042-01); RCGT analysis, 2023.

The affordability of community sports impacts parents' enrollment decisions for their children

Affordability of SPAR opportunities

Chart 17: Reasons for not registering children in community sports in Canada

Canada, in %, 2020



According to parents in the Canadian Centre for Ethics in Sport (CCES) study, the second most frequently cited reason for not enrolling their child into sports was the high cost. Indeed, one out of five respondents said that they did not register their child in community sports because it was too expensive. Similarly, in a 2023 survey from CFLRI, 16% of participants reported that they find SPAR opportunities unaffordable.

The aspect of safety came first among the reasons for not registering children in community sports with 35% of respondents thinking that community sports were not safe due to bullying, violence and concussions.

Eleven percent did not register their children due to the lack of availability/convenience of community sports.

Sources: CCES 2021 Community Sport Survey, CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Retail sales of sporting and leisure products, athletic footwear and recreational vehicles reached $23.3B in 2022

Retail Sales

Retail sales of SPAR equipment serves as an indicator of the economic impact generated by SPAR activities.

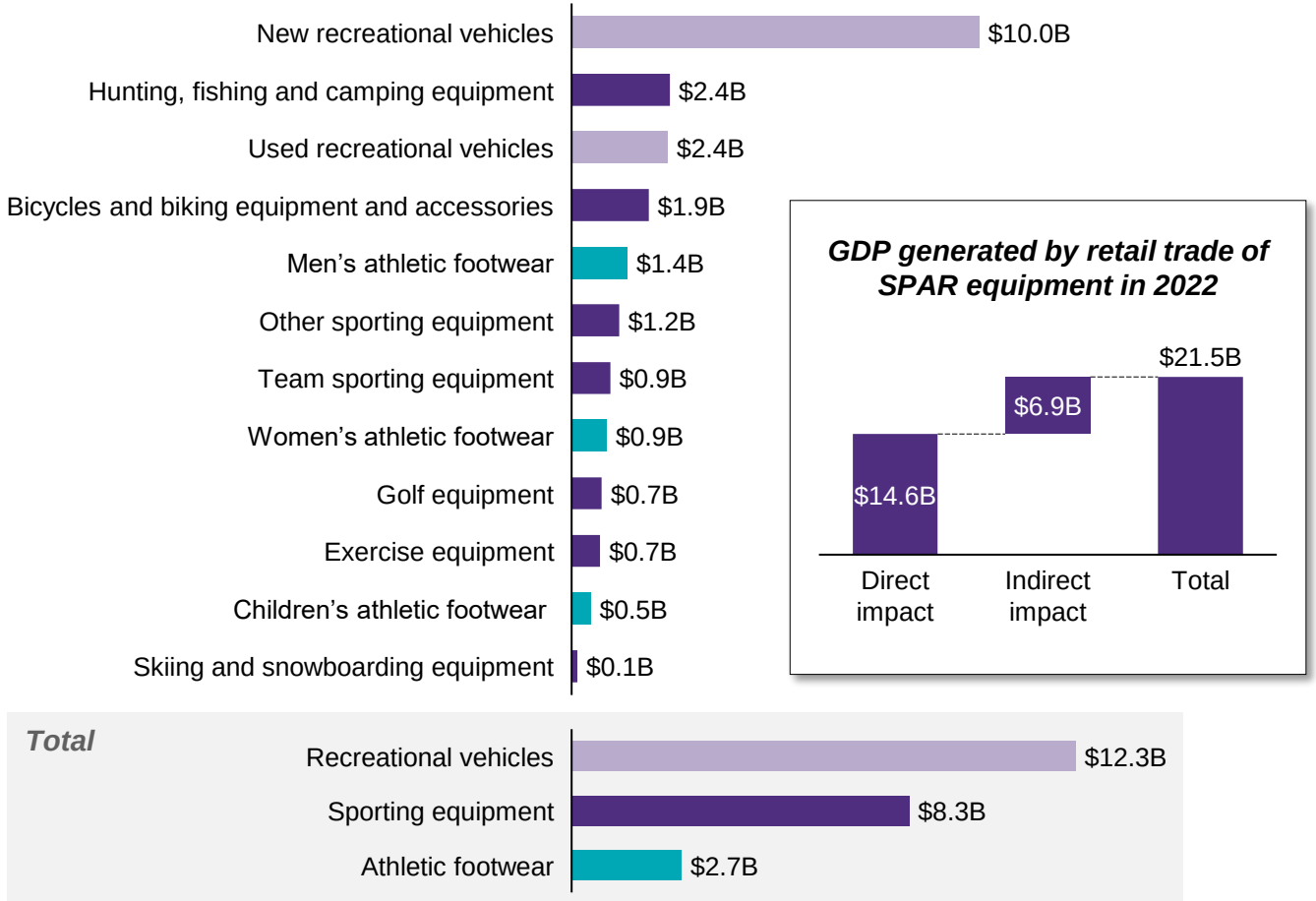
Recreational vehicles stand out as the most significant in 2022, accounting for retail sales of $12.3B, followed by sporting equipment ($8.3B) and athletic footwear ($2.7B). Collectively, the retail trade within the SPAR sector totals to $23.3B. It is important to note that this total does not include all sport and recreation products and therefore is likely an underestimate.

Within the sporting and leisure products category, hunting, fishing, and camping equipment emerge as the highest-selling subcategories.

Since only part of the products included in the retail sales values are produced in Canada, not all retail sales values contribute to GDP. Therefore, a simple multiplier to estimate the impact of the retail sales on GDP has been used in the estimated value to contribute to the overall economic impact value. As such, sales generated $21.5B of GDP in 2022.

Chart 18: Retail trade from sporting equipment, athletic footwear and recreational vehicles

Canada, retail sales, in billions of dollars ($B), 2022



Note: The sums may not add up due to rounding or the quality of data available.

Sources: Statistics Canada (Table: 20-10-0016-01 and Table: 36-10-0594-01); RCGT analysis.

Social impacts

SPAR positively impacts society by fostering volunteering and promoting enhanced social behaviour

Social impact

Proportion of adults who **volunteered in a sport-related activity** in 2020

27%

Number of **hours allocated to volunteering** in sports

779,604,984

Value of volunteering in 2020

$13.6B

The **social impacts** generated by SPAR have been estimated at **$13.6 billion** in 2020

Contribution of **SPAR** on **social behaviours**

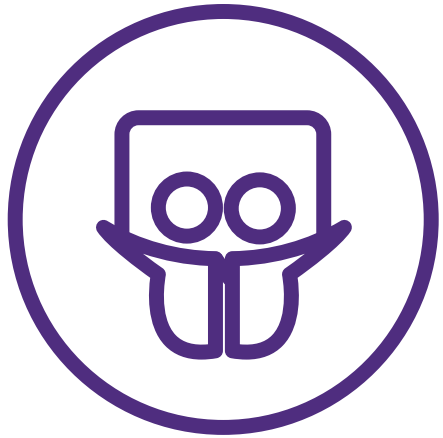
- Reduction in feelings of **loneliness** and isolation
- Decrease in **harmful behaviours**
- Reduction in **anti-social**, **deviant**, or **risky behaviours** in the community

Participating in SPAR activities offers the opportunity to cultivate a range of social skills

The social benefits of SPAR are extensive, encompassing various outcomes such as increases in volunteer participation, the potential to affect crime rates, and enhanced community pride.

This section presents eight indicators that assess the social impacts of SPAR, categorized into two groups:

1. Community participation
2. Social behaviours



The value of volunteering in Canada was estimated at $13.6B in 2020

Value of volunteering

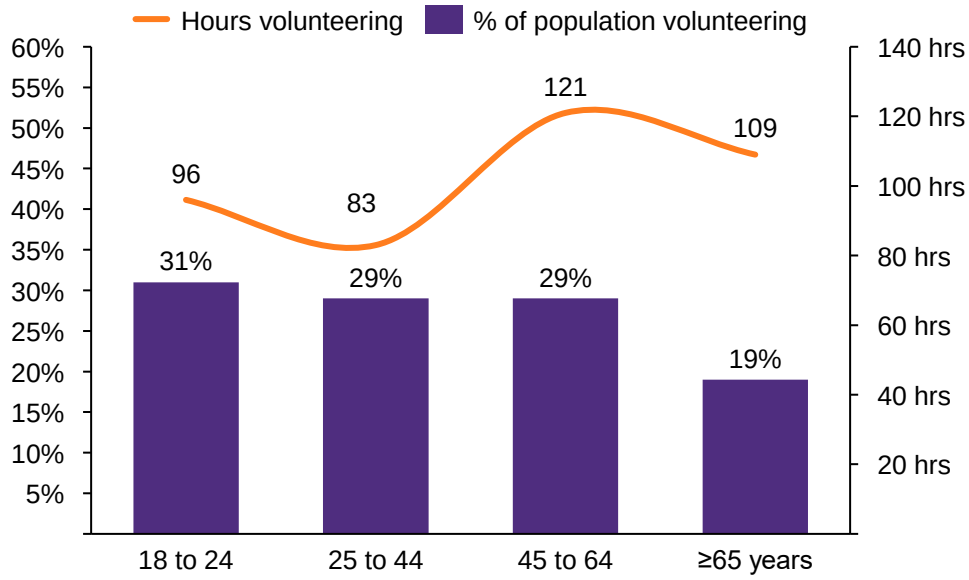
According to the CFLRI 2020 Sport Monitor Survey, 27% of adults report volunteering in an activity related to sport. Participants reported devoting approximately 105 hours to volunteering annually. The level of participation and the average number of hours of volunteering vary by age (see Chart 19).

The value of volunteering was calculated by multiplying the total number of hours spent volunteering (in sport) in Canada by the average part-time hourly wage for jobs in the *amusement and recreational* industry. The total value of volunteering in sport in 2020 was estimated at $13.6 billion.

The percentage of Canadians who report volunteering in sport has decreased since the COVID-19 pandemic. The CFLRI will continue to monitor this trend and provide updates on the state of volunteering in sport as new data become available.

Chart 19: Volunteering in sport by age

Canada, by age group, in hours, in %, 2020



Total volunteering hours in Canada		*Average hourly wage Amusement and recreation industry*		*Estimated value of volunteering in 2020*
779,604,984	**X**	**$17.48**	**=**	**$13.6B**

Notes: Numbers may not add up due to rounding. The 2016 census data was used under the recommendation of the CFLRI.

Sources: CFLRI (2020 Sport Monitor (Adult focus)), Statistics Canada (Census 2016 and Table: 36-10-0676-01); RCGT analysis.

SPAR benefits the community

SPAR contribution to the community

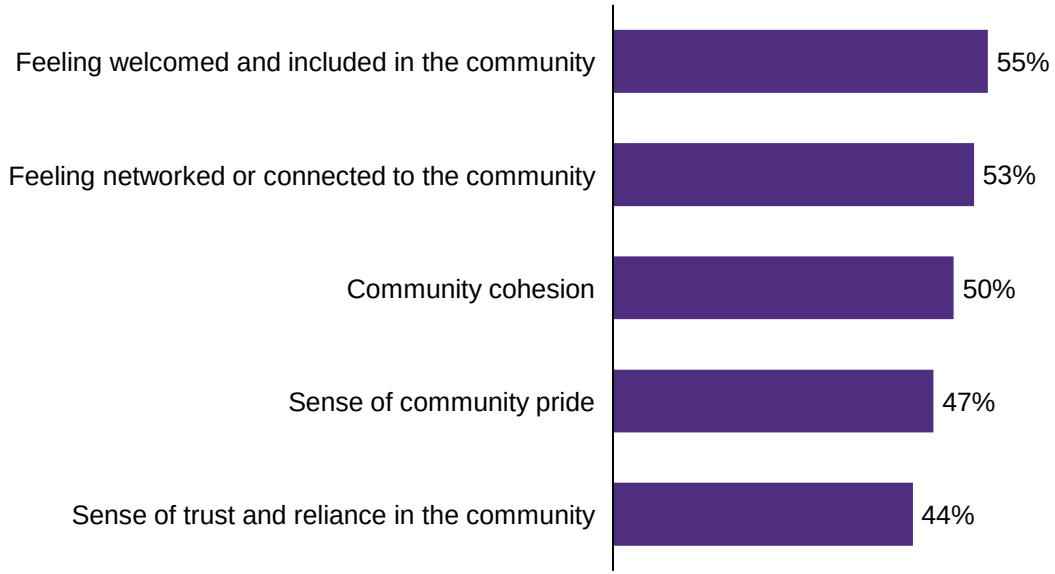
The SPAR sector has a significant impact on various aspects of community life.

According to survey participants, it contributes to community in several ways. The highest proportion of participants reported that SPAR contributes to feeling welcomed and included in the community, followed by feeling networked and connected.

Participants also think that SPAR contributes to community cohesion to a moderate or great extent (50%), a sense of community pride (47%) and a sense of trust and reliance in the community (44%).

Chart 20: Perception of contribution of SPAR on the community

Canada, CFLRI survey, % of participants, moderate or great contribution, 2023

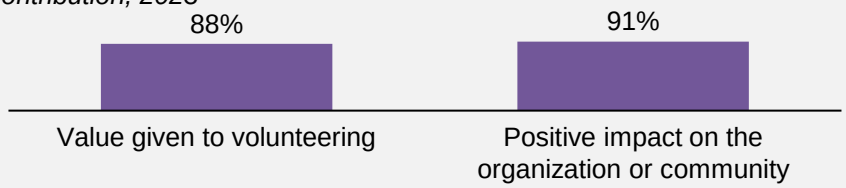


Volunteering contribution

Volunteering carries value in the community and has a positive impact on organizations. Indeed, 88% of participants recognize the value of their contribution as volunteers, and an even higher percentage, 91%, believe that their volunteering efforts contribute positively to the organization or community.

Chart 21: Contribution of SPAR volunteering

Canada, CFLRI survey, % of participants, moderate or great contribution, 2023



Sources: CFLRI 2020 Sport Monitor, CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Sport has the potential to play a role in the development of youth and anti-social behaviours

Relationship to crime

The literature regarding the relationship between sport/physical activity and crime is mixed; many programs have not been suitably evaluated. Despite this, some research does highlight the importance of sport in the development of adolescents and young adults. Indeed, it has the potential to increase their engagement, sense of community, and to develop social and integration skills.

Cameron and MacDougall (2000) mention that sport has the potential to influence offending behaviour among youth. Other studies support that participation in sports and physical activity provides a sense of belonging. It also brings young people together and provides them with a place to learn and access services to meet their needs.

However, experts emphasize the importance of coaching in sports participation. Coaches can play a primary role in the development of youth. First, the programs put in place by coaches and volunteers create an environment for youth and involve elements of trust, specific values, and responsiveness. Secondly, meaningful relationships and interactions between adults and youth are an important aspect of development through sport. For a positive development experience, a combination of the quality of the youth-coach relationship and a coach's transformational leadership behaviour is essential.

Brosnan (2017) aims to assess the relationship between participation in sporting activities and crime. This research study examines the relationship between sports participation and crimes against property and persons in 323 local authorities in England between 2012 and 2015. The results indicate that sports participation reduces the crime rate for both types of crime. The impact is stronger, however, for crimes against persons than for property crimes. Indeed, the study indicates that a 10% increase in sports participation leads to a decrease of 1.3% to 1.56% in crimes against persons. For property crimes, the same 10% increase in sports participation leads to a decrease between 0.64% to 0.73% in these types of crimes.

Sources: Cameron and MacDougall (2000), International Centre for Criminal Law Reform (ICCLR), Brosnan (2017), RCGT analysis.

SPAR improves social behaviours

Social contribution to SPAR

SPAR can also influence social behaviours by addressing feelings of loneliness and reducing harmful, anti-social, deviant, or risky behaviours.

According to the survey, 61% of adults reported that SPAR contributes significantly to reducing feelings of loneliness, while 53% acknowledged its positive impact on reducing harmful behaviours.

Additionally, 53% of survey respondents acknowledged that SPAR plays a role in decreasing anti-social, deviant, or risky behaviours within the community.

Chart 22: Contribution of SPAR to social behaviours

Canada, CFLRI survey, % of participants, moderate or great contribution, 2023

Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Environmental impacts

The benefits of investing in green urban environments and active transport networks are not to be underestimated

Environmental impacts

Urban forests also remove air pollution

Total amount of air pollution removed

16,500
tonnes in 2010

Human health value

$227.2
million in 2010

$294.9
million in 2022

A 5% reduction in private car usage in Canada would reduce the **social cost of GHGs** by

$2.8B

Estimate for 2020

In 2020, the **estimated replacement value** of **recreation and sports facilities** and **active transportation infrastructure** in Canada was **$42.5B** in **fair, poor, or very poor condition.**

Recreation and sports facilities	*$33.5B*
Active transportation infrastructures	*$9.0B*
Total	**$42.5B**

Estimated benefits/ cost of incorporating a fully integrated **walking and cycling transport network**

11:1

The **environmental impacts** have been estimated to **$42.5 billion** in 2020

A natural environment plays a significant role in influencing participation in SPAR activities

Forests and parks provide Canadians with opportunities to engage in sport and be physically active. The conservation of forests and the presence of green spaces in urban areas are factors that encourage participation in sport and recreation. It contributes to air pollution removal, as well.

Active transportation also plays an important role in the SPAR environment.

Indicators are presented in the section that reflect the importance of the environment for SPAR:

1. Air pollution removal
2. Active transportation
3. SPAR facilities visits
4. Infrastructure status
5. Energy consumption

The contribution of trees and parks to our health is important

Human health value attributed to household and ambient air pollution

Air pollution affects human health and well-being, ecosystem health, climate and crops. Among other effects, common air pollutants can cause the premature development of respiratory and cardiac diseases. Air pollution removal, therefore, has beneficial effects on humans in different ways. Urban trees bring many benefits, but mostly they can remove air pollution, sequester carbon, cool air temperature while adding aesthetic beauty to cities.

The 2010 study presented below investigated the amount of pollutants removed by trees in 86 Canadian cities.

Air pollution removal by urban forests in Canada and its effect on air quality and human health

As mentioned, this study examined air pollution removal by urban forests in 86 Canadian cities, estimated the capture of pollution (tonnes) and the health value ($CAN). Based on the Air Quality Benefits Assessment Tool (AQBAT) of Health Canada, the health value estimates the human health costs and/or benefits associated with changes in ambient air quality. This paper quantifies the benefits of trees on health and highlights the importance of urban forests.

Total amount of pollution removal	**16,500 tonnes** *in 2010*	**Average removal per square metre of canopy cover**	**3.72 g/m²**
Human health value	**$227.2 M** *in 2010* **$294.9 M** *in 2022* [1]	**Value per hectare of tree cover**	**$511/ha**

1. The human health value has been adjusted to 2022 for the environmental benefit calculation.

Sources: Nowak (2017); RCGT analysis.

There is a total of 30M hectares of protected forests in Canada

Forest preservation

Protected forests, national parks and reserves are areas which facilitate SPAR activities. Their presence, therefore, becomes essential to the SPAR sector.

Forest conservation involves preservation: 30 million hectares are currently protected in Canada, representing 8.3% of Canadian forests.

Potential effects of climate change, however, will have some implications for forest areas. Expansion will be observed in some regions, and losses will be faced in others. These effects may also impact the protected areas.

Parks Canada is responsible for the 37 national parks and 10 national park reserves representing 336,343 km^2 of protected land. These parks provide spaces for Canadians to engage in physical activity and participate in leisure activities.

Protected forests

There is a total of approximately **362M hectares of forested area** in Canada.

Around **30M hectares** of forest were **protected** in Canada in 2020.

This represents **8.3% of Canadian forests.**

Area protected by national parks and national park reserves

Parks Canada is responsible for **37 national parks** and **10 national park reserves.**

Approximately **336,343 km^2** of land are protected by parks.

Parks Canada **protects these areas** and manages the visitors.

Sources: The State of Canada's Forest – Annual Report 2022, Natural Resources Canada; Parks Canada https://parks.canada.ca/pn-np; RCGT analysis.

Urban greenness has declined from 2001 to 2019, mostly in medium and large communities

Urban greenness areas

The **urban greenness** was measured with the **normalized difference vegetation index (NDVI).**

NDVI is an indicator of vegetation presence and quantity by the photosynthetic activity.

As observed by Nowak (2017), tree coverage is beneficial to residents and has important impacts on health value. Nevertheless, urban greenness has declined between 2001 and 2019 in Canada.

The observed decreases in urban greenness occurred mainly in medium and large population centres. Indeed, 71% of medium population centres have seen their urban greenness decrease between 2001 and 2019. For large population centres, it was more like 77%.

Small population centres have the highest average urban greenness. The number of small population centres that have seen an increase of their urban greenness is also higher than other sizes of centres.

Chart 23: Average urban greenness by population centre size

Canada, in % of area, 2001, 2011, 2019 and 2022

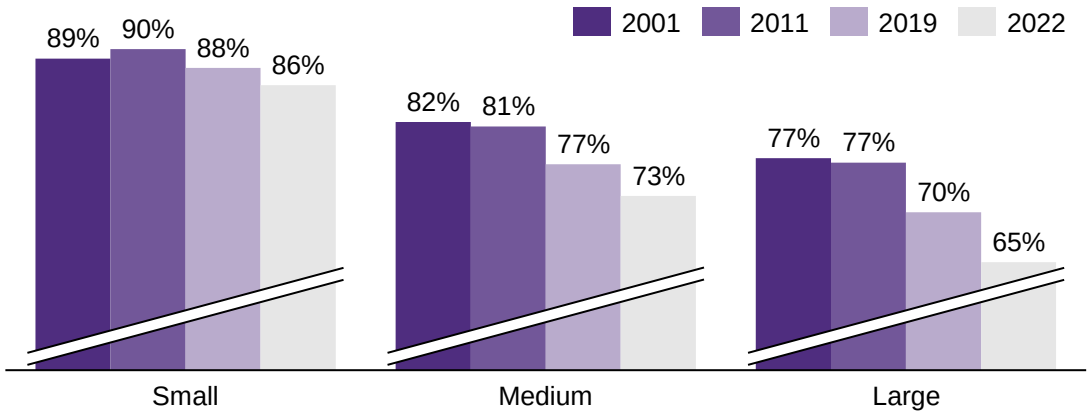
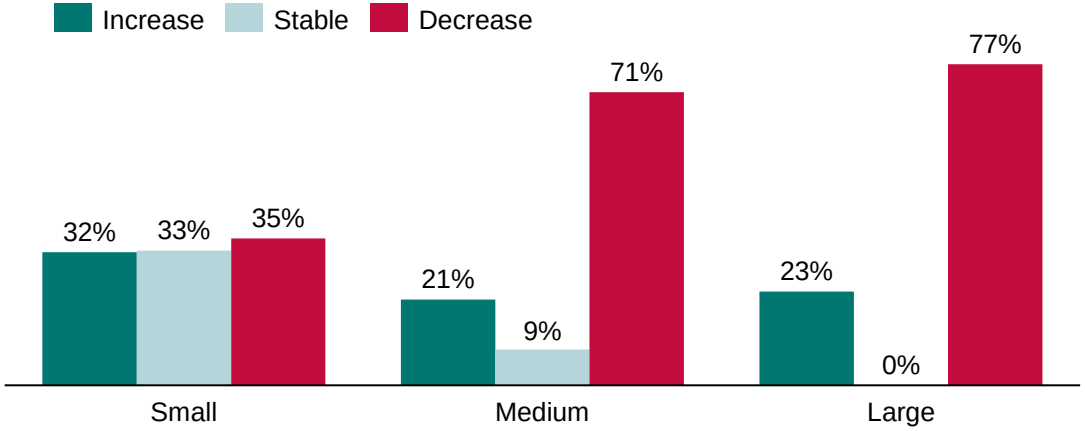


Chart 24: Change in type of urban greenness between 2001 and 2019

Canada, in % of population centres, change in urban greenness



Sources: Statistics Canada (Table: 38-10-0158-01), Statistics Canada (Urban greenness, 2001, 2011 and 2019); RCGT analysis.

Between 2018 and 2022, Ontario experienced the largest decline in average urban greenness among the provinces

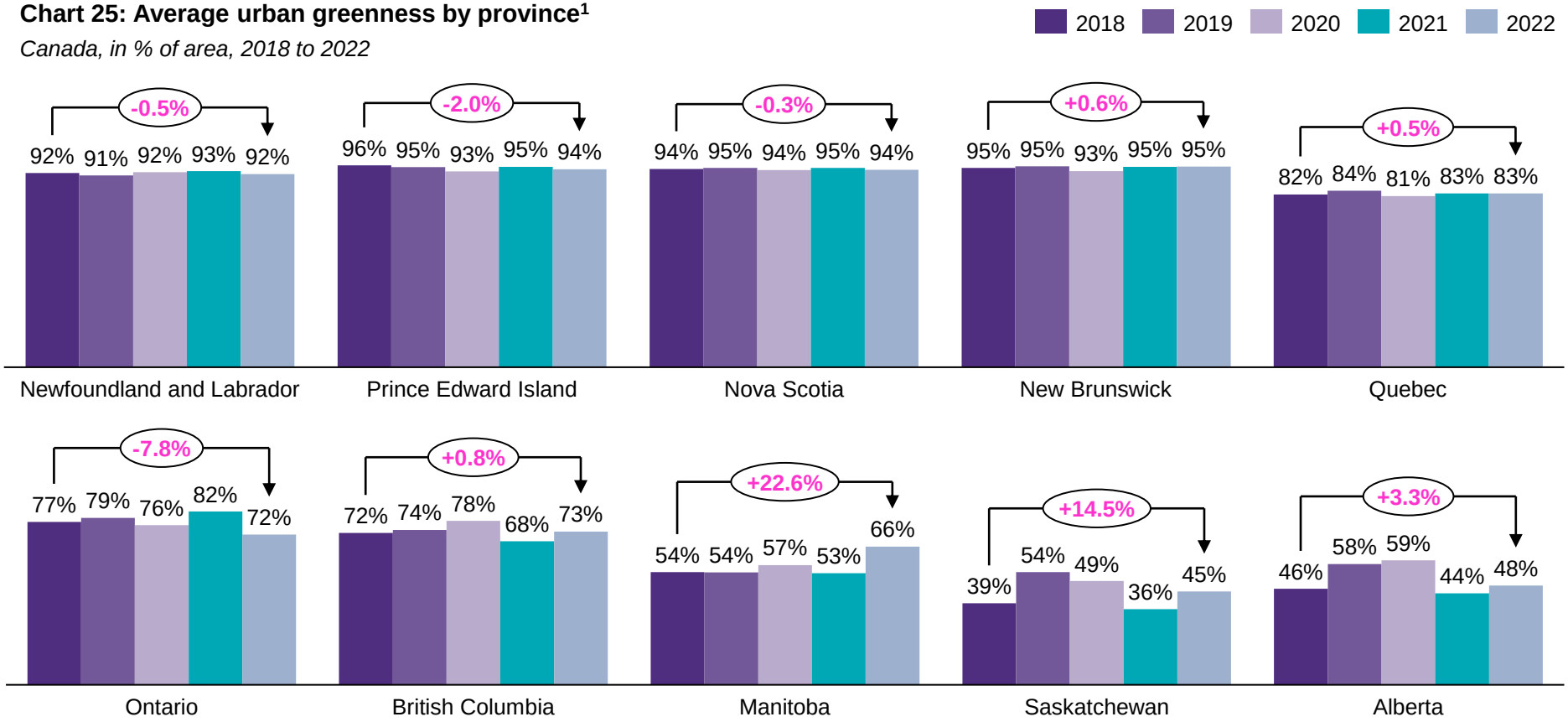
Urban greenness areas

New Brunswick was the province with the highest average urban greenness in Canada in 2022, with a proportion of 95%. Prince Edward Island and Nova Scotia closely followed with an average urban greenness of 94%.

Manitoba experienced the largest increase in 2018 and 2022 with a significant rise of 22.6%.

Chart 25: Average urban greenness by province[1]

Canada, in % of area, 2018 to 2022



Sources: Statistics Canada (Table: 38-10-0158-01); RCGT analysis.

1. Data were not available for Yukon, Nunavut and the Northwest Territories.

Investing in active transportation creates numerous benefits according to a New Zealand study *(Chapman et al., 2018)*

Value of active transportation

A central and local government-funded initiative to promote cycling and walking was put in place in two North Island provincial cities. The aim of this initiative was to change the travel patterns of residents. Investments of NZ$11.2 million were made to provide residents and users with a fully integrated walking and cycling transport network. A substantial marketing campaign was also launched to promote the acceptance of cycling on the road.

The Activating Communities to Improve Vitality and Equality (ACTIVE) results show the direct impact on transportation patterns of the initiative.

The benefit-cost analysis shows that the benefits of these kinds of projects heavily outweigh the cost of the new infrastructure and the marketing campaigns. For a discount rate of 3.5%, the benefit-cost ratio is 11 to 1.

Chart 26: Summary of ACTIVE results

Results from Chapman et al. (2018)

Variable	Estimate	Impact
Net increase in non-motorized (active) trips	30%	Active transportation
Increase in number of non-motorized (active) trips	17.3 million	Active transportation
Decrease in motorized trips	5.3%[1]	Motorized transportation
Savings in motorized vehicle-km (VKT) as % of total motorized VKT	1.21%	Motorized transportation
Savings in annual motorized VKT	4.87 million	Motorized transportation
Savings in CO_2 emissions	1,149 tonne[2]	CO_2 emissions
Health benefits (per year)	34.5 DALYs[3] 2 deaths saved	Health

1. *One non-motorized trip saves one motorized trip. Only 15% of trips are non-motorized.*
2. *The standard emissions factor for the passenger vehicle fleet use is 0.2359 kgCO_2 / VKT.*
3. *Disability-adjusted life years*

Chart 27: Costs and benefits of an intervention to increase cycling and walking

In millions in net present value terms, results from Chapman et al. (2018)

Discount rate	Health and injury benefits	CO_2 reduction benefits	Net benefits	Cost	Benefit-cost ratio
3.5%	$163.6 million	$2.6 million	$151.2 million	$15.0 million	11:1
6.0%	$153.1 million	$2.1 million	$141.1 million	$14.1 million	11:0

Sources: Chapman et al. (2018); RCGT analysis.

The cost of fatalities and serious injuries must be taken into account when studying the environmental impact of SPAR

Road traffic injuries related to active transportation

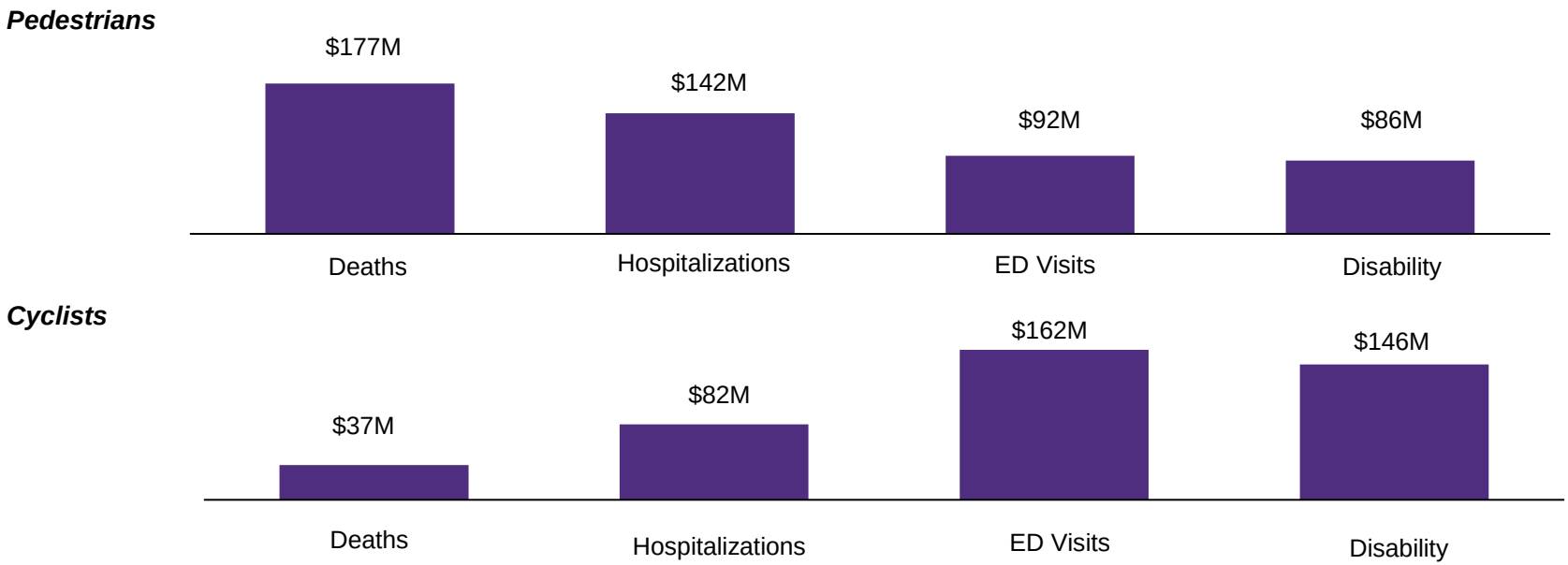
Active transportation involves sharing the road with motorized vehicles. Being a pedestrian or a cyclist, therefore, involves some risks including the potential for fatalities and serious injuries. The environment and the walking and cycling transport network can make a difference in the safety of users as shown by Chapman et al. (2018).

The burden on the health care system is amplified due to the incidents involving pedestrians and cyclists. Costs for death and hospitalization outcomes are highest for pedestrian accidents, while for cyclist accidents, the costs for ED visits and disability outcomes are higher. Note that these costs do not only represent accidents occurring during active transportation.

As a comparison, the cost of transport incidents was $2,125M for motor vehicle in 2022.

Chart 28: Cost of transport incidents by injury outcome for pedestrians and cyclists

Canada, in millions of dollars ($M), estimated for 2022



Note: Numbers may not add up due to rounding.

Sources: Statistics Canada (Table: 18-10-0005-01); Parachute (The highest costs: Falls and transport), 2021; RCGT analysis.

GHG saving in social value from a 5% reduction in private cars is estimated at $2.8B

Increased use of alternative transport

There are significant social costs associated with GHG emissions. As transportation is a GHG-intensive sector, any possible reductions would lower the social costs of GHG emissions.

So, by reducing the number of private cars on the road, the impact of GHG emissions could be lower. Car owners would leave their cars behind and use alternative forms of transport such as buses, walking, cycling and car-sharing. Active transportation has many benefits, including increasing activity levels.

An estimate of the social costs that could be avoided by reducing the number of cars on the road was carried out under three scenarios. The assumptions used and the scenario results are presented below.

Assumptions

Social cost of one tonne of GHG emitted by a car	**$522.3**
Average tonnes of emissions by car per year	**4.6 tonnes**
Number of private cars registered in 2019 that were less than 4,500 kg	**23,472,111 cars**

Results

Scenarios	*% of cars converted to AT*	*Number of cars removed*	*GHG saving in social value*
1	**1%**	234,721	$563,944,501
2	**5%**	1,173,606	$2,819,722,505
3	**10%**	2,347,211	$5,639,445,011

Sources: Statistics Canada (Greenhouse gas emissions from private vehicle operation, by type of gas, Canada, 2012; and Table: 23-10-0067-01, 2020); The White House (Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide), 2021; Bank of Canada (Annual exchange rates), 2023; Canadian Geographic (Challenge 1: Commuting), 2023; RCGT analysis.

Despite wide availability of public transit systems, few of the population use them regularly

Availability of public transit systems

Seventy-eight percent of participants report having a public transit system in their community.

For the participants who have a public transit system, 14% use it frequently and 13% use it sometimes.

However, the share of participants that never or rarely use their public transit system is significant, with a proportion of 73%. Of these, 48% percent never use the public transport of their community and 25% rarely do.

Chart 29: Presence and use of public transit system in community

In % of participants, CFLRI survey, 2023

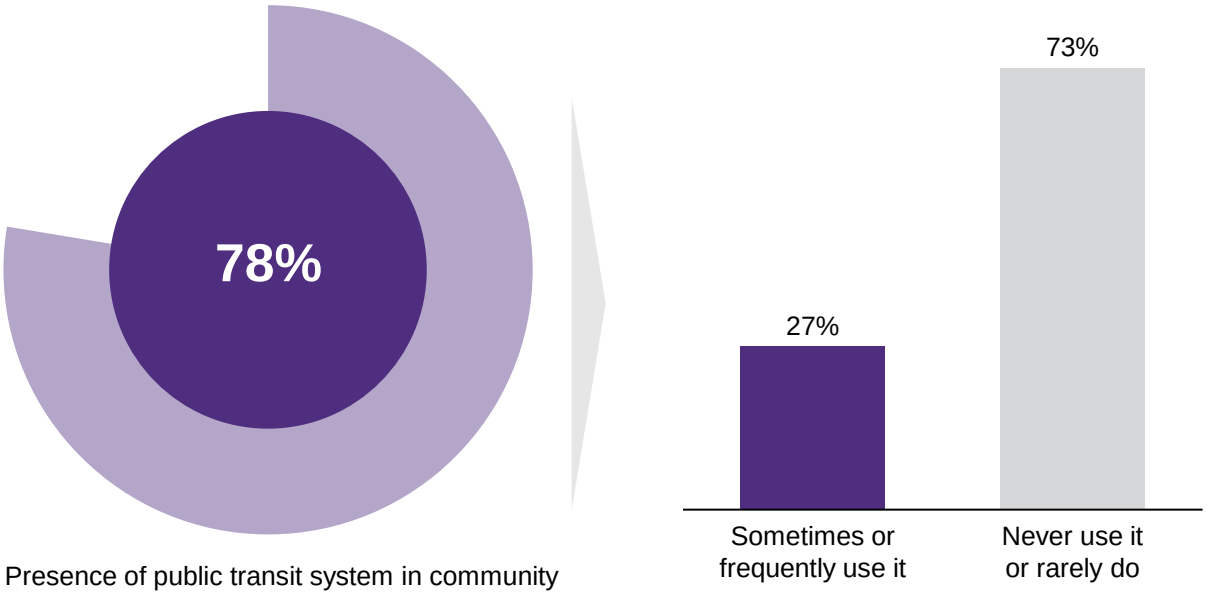
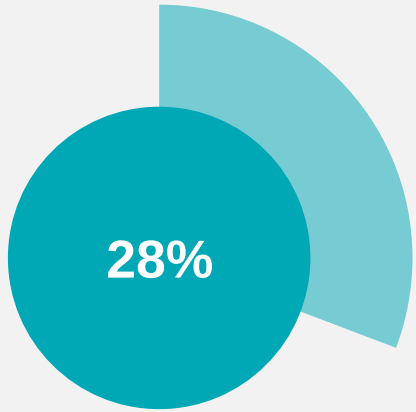


Chart 30: Presence of a public transport system

% of communities, CFLRI Survey, 2020-2021

Twenty-eight percent of communities with at least 1,000 residents have a public transport system.



Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey; RCGT analysis.

Canadian communities offer active transportation facilities to their residents

Active transport system

Formal plans and infrastructure for active transportation are important in a community to support commuters effectively and efficiently.

Seventeen percent of participating communities (with at least 1,000 residents) have a formal plan for active transportation.

Some amenities and infrastructure supporting active transportation are more frequent in Canadian communities like multi-use trails, school safety zones and pedestrian-friendly downtowns.

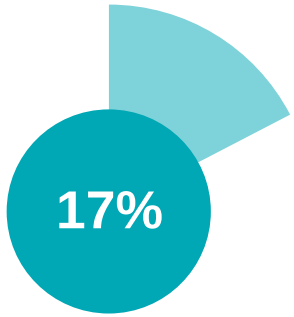


Chart 32: Formal plans for active transportation
In % of communities, CFLRI survey, 2020-2021

Seventeen percent of communities have a formal plan for active transportation.

Chart 31: Communities with bicycle infrastructure by type
In % of communities, CFLRI survey, 2020-2021

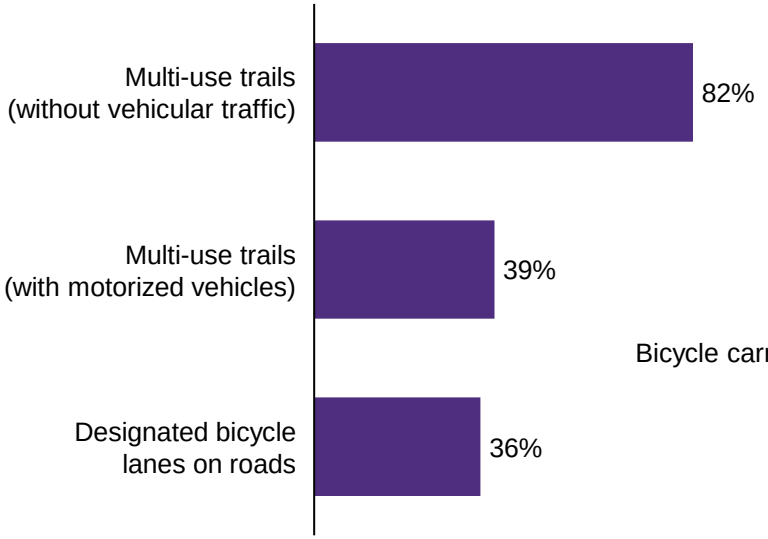
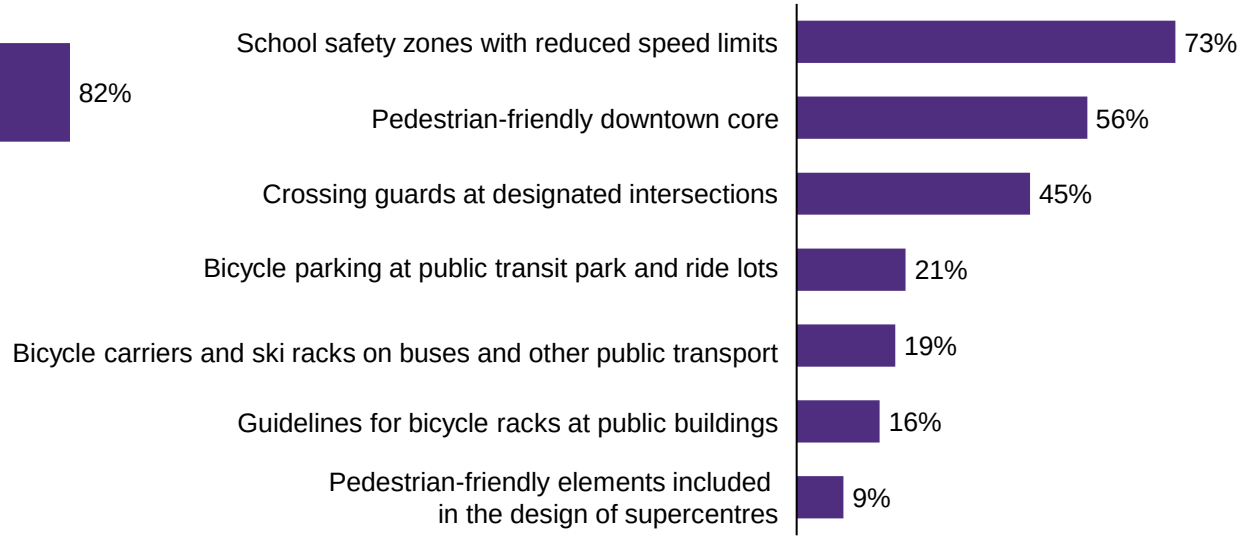


Chart 33: Communities with active transportation supports by type
In % of communities, CFLRI survey, 2020-2021



Sources: CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey (communities with at least 1,000 residents); RCGT analysis.

92% of Canadians visited a park or green space in 2021

Park and green spaces visit

Eighty-five percent of Canadians visited a park or green space near their homes and 7% visited a park that was farther away. A greater proportion of Canadians living in non-census metropolitan areas only visited a park that was not close to home.

Residents of Manitoba and British Columbia are the most frequent visitors to parks and green spaces, closely followed by the residents of Alberta and Prince Edward Island (although visits were high in all provinces).

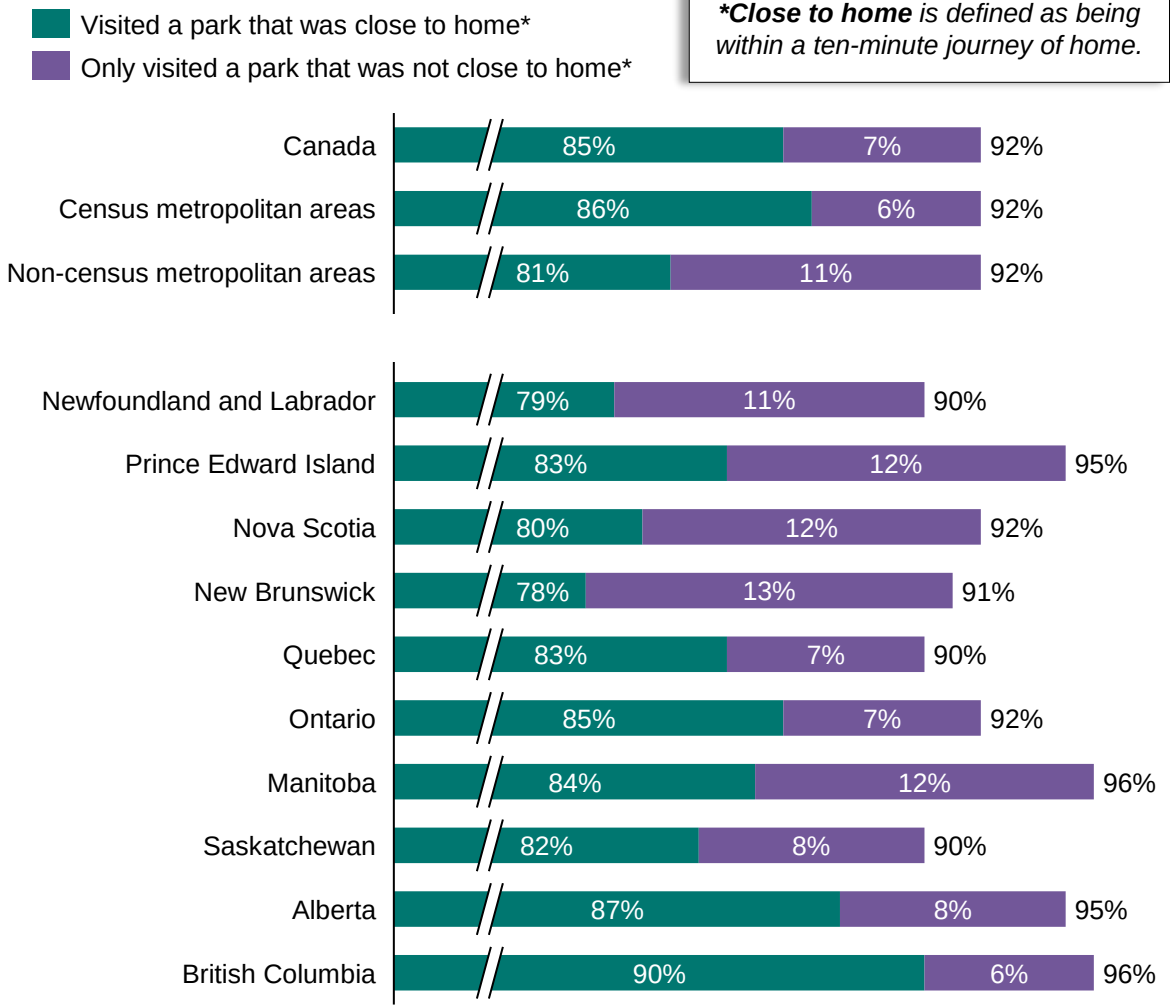
91%

of Canadians have a **park or green space close to home*** in 2021

Chart 34: Park and green space visits by residents[1]

Canada, provinces, % of residents, 2021

***Close to home** is defined as being within a ten-minute journey of home.*



1. Data were not available for Yukon, Nunavut and the Northwest Territories.

Sources: Statistics Canada (Table: 38-10-0020-01); RCGT analysis.

Climate change affects the ability to participate in SPAR according to survey participants

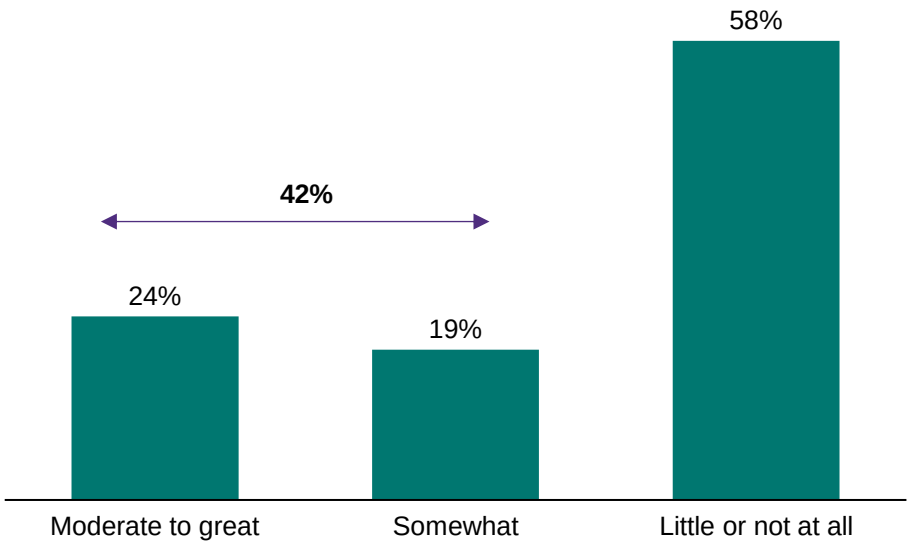
Climate change on SPAR participation

Forty-two percent of participants indicated that environmental effects affected their ability to participate in SPAR: 24% reported to a moderate to a great extent and 19% somewhat changed.

It is likely that climate change will affect the SPAR sector in the coming years, so this will need to be monitored.

Chart 35: Impact of environmental effects of climate change on the ability to participate in SPAR

% of participants, CFLRI survey, 2023



Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Note: Numbers may not add up due to rounding.

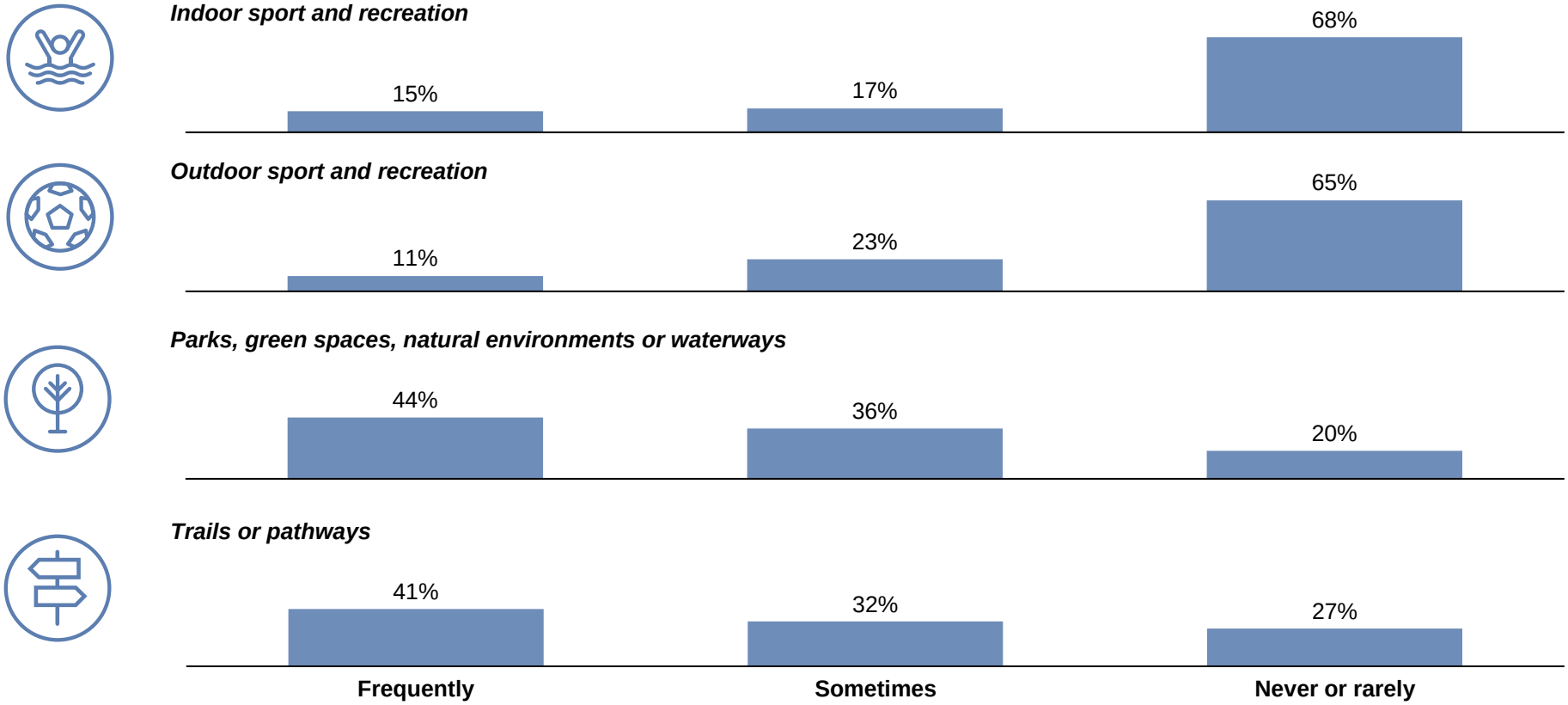
The most frequently visited SPAR facilities reported by survey participants were parks, waterways, trails, and pathways

Use of SPAR facilities

Indoor and outdoor sport and recreation facilities are the least used by the participants. Only 15% and 11% of survey participants use them frequently.

Chart 36: Number of visits to SPAR facilities

In % of participants, CFLRI survey, 2023



Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Note: Numbers may not add up due to rounding.

More than one in four survey participants report being very satisfied with the accessibility of SPAR facilities

SPAR infrastructure accessibility

On the other hand, less than 10% of participants expressed dissatisfaction with the accessibility of SPAR facilities.

However, a significant number of respondents indicated uncertainty about the accessibility of facilities.

Chart 37: Level of satisfaction with the accessibility of the SPAR facilities to people to participate comfortably by type of specificity

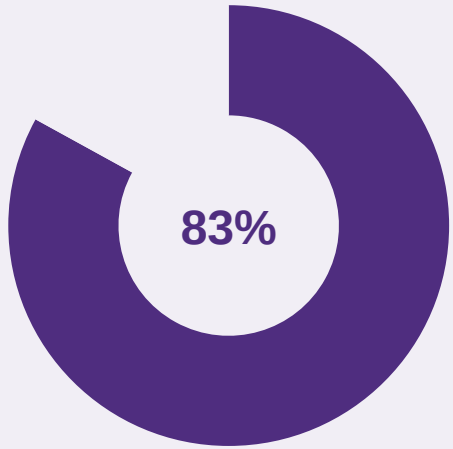
In % of participants, CFLRI survey, 2023

SPAR infrastructure safety

83% of participants indicated that safe (free from crime and harassment, well lit, etc.) SPAR facilities and services are available.

Chart 38: Availability of safe SPAR opportunities

In % of participants, CFLRI survey, 2023



Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Note: Numbers may not add up due to rounding.

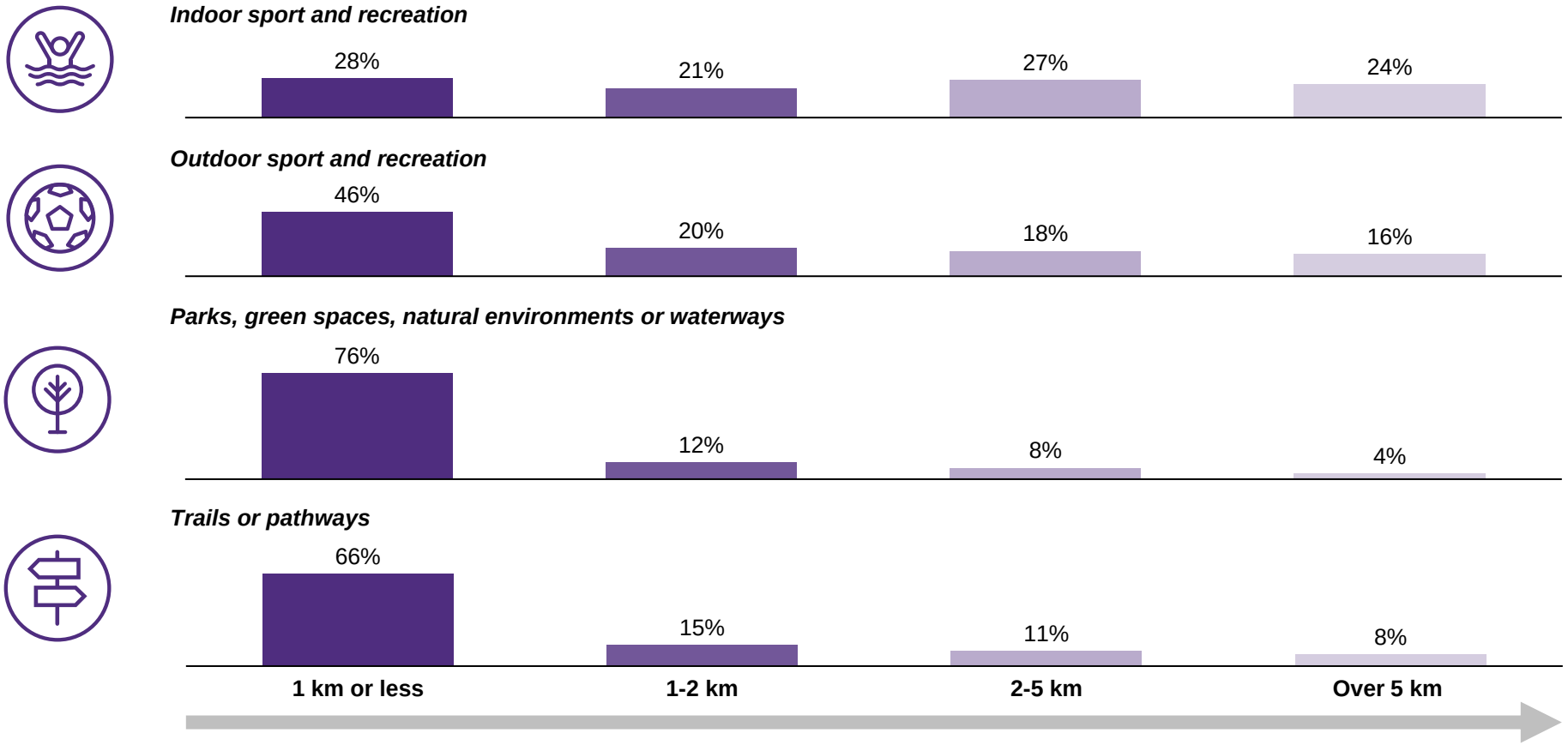
The majority of survey participants reside within a distance of less than 2 km from SPAR facilities

Household proximity to SPAR facilities

Trails or pathways and parks, green spaces, natural environments or waterways are the most accessible SPAR facilities. Next are the outdoor sport and recreation facilities and the indoor sport and recreation facilities are last.

Chart 39: Proximity of SPAR facilities to household

In % of participants, CFLRI survey, 2023



Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Note: Numbers may not add up due to rounding.

The quality of the SPAR facilities is considered satisfactory by its users

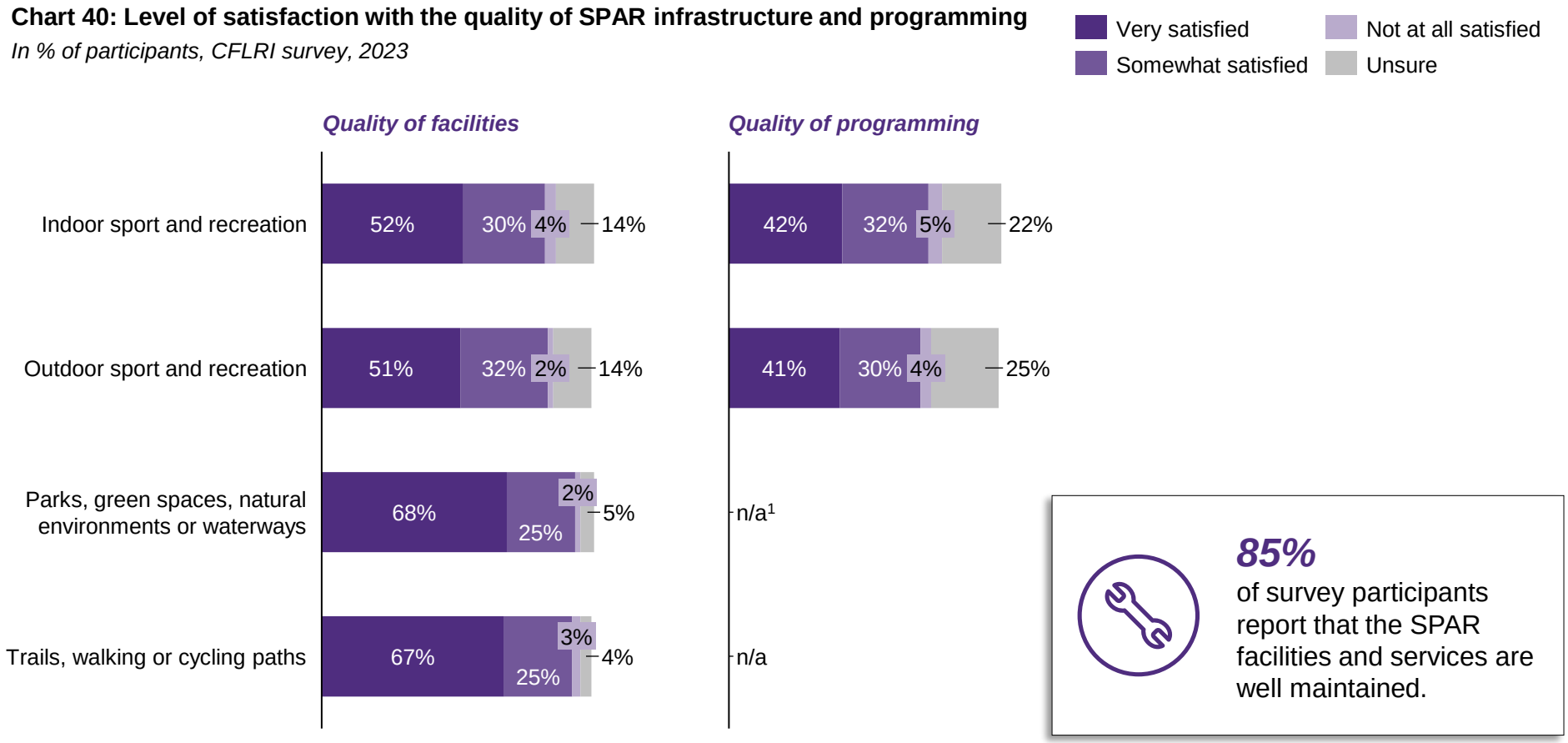
Level of satisfaction of the quality of SPAR infrastructure

Most of the survey participants reported being very satisfied with the quality of the SPAR facilities. Parks, green spaces, natural environments or waterways and trails, walking or cycling paths obtained the highest satisfaction rate.

For the quality of programming, the level of participants being very satisfied is lower, at roughly 40%.

Chart 40: Level of satisfaction with the quality of SPAR infrastructure and programming

In % of participants, CFLRI survey, 2023



85%
of survey participants report that the SPAR facilities and services are well maintained.

1. Not applicable.

Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

The estimated replacement value of the recreational and sports facilities was $33.5B in 2020 in Canada

Estimated replacement value of recreation and sports facilities in fair, poor, and very poor condition

Chart 41: Estimated replacement value of recreation and sports facilities in fair, poor, or very poor condition in Canada

Canada, by infrastructure asset, in billions of dollars ($B), 2020

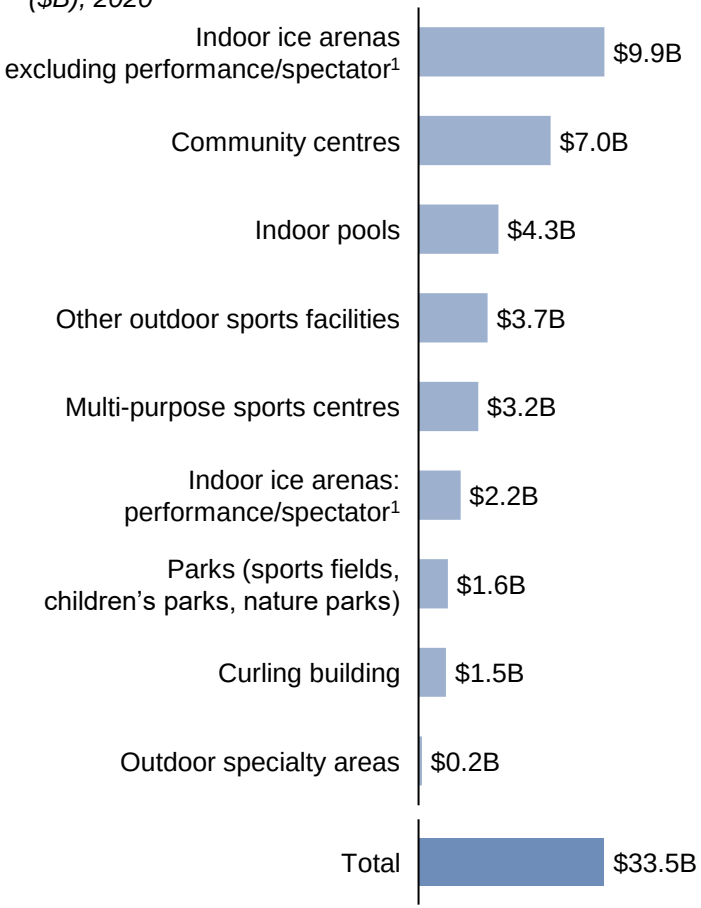
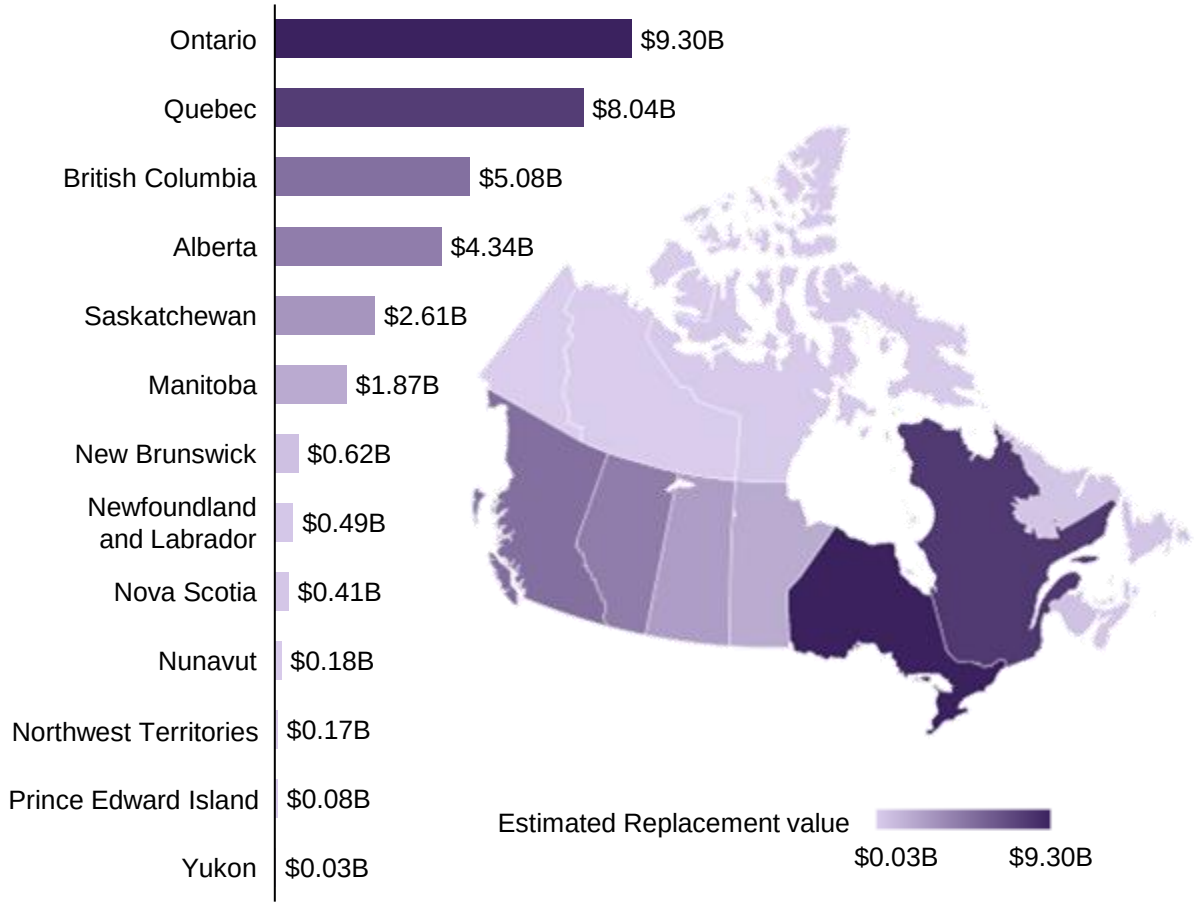


Chart 42: Estimated replacement value of recreation and sports facilities in fair, poor, or very poor condition by province and territory

Provinces and territories, in billions of dollars ($B), 2020



Notes: The lack of province-specific data means that the sum of the provinces is less than the Canadian total. Sum may not add up due to rounding.
Sources: Statistics Canada (Table: 34-10-0284-01); RCGT analysis. *1. With 1,000 plus seats.*

As for the active transportation infrastructure, the estimated replacement value was $9.0B in 2020 in Canada

Estimated replacement value of active transportation infrastructure in fair, poor, or very poor condition

Improved infrastructure could potentially have a positive impact on sport participation and physical activity levels among Canadians. Thus, it would be beneficial to invest in upgrading recreational and sports facilities as well as the active transportation infrastructure. The benefits of physical activity are numerous, as this report shows.

For the sports infrastructure presented on the previous page, a total of $33.5B should be invested to upgrade facilities that are currently in very poor, poor and fair conditions. Half of this amount would be allocated to Ontario and Quebec facilities.

The investments required to upgrade the active transportation infrastructure are also significant. The estimated investment required to upgrade sidewalks only in Canada was $6.9B in 2020. Infrastructure in the provinces of Ontario and Alberta require greater investment ($3.19B and $1.8B respectively).

Chart 43: Estimated replacement value of active transportation infrastructure in fair, poor, or very poor condition in Canada

Canada, by infrastructure asset, in billions of dollars ($B), 2020

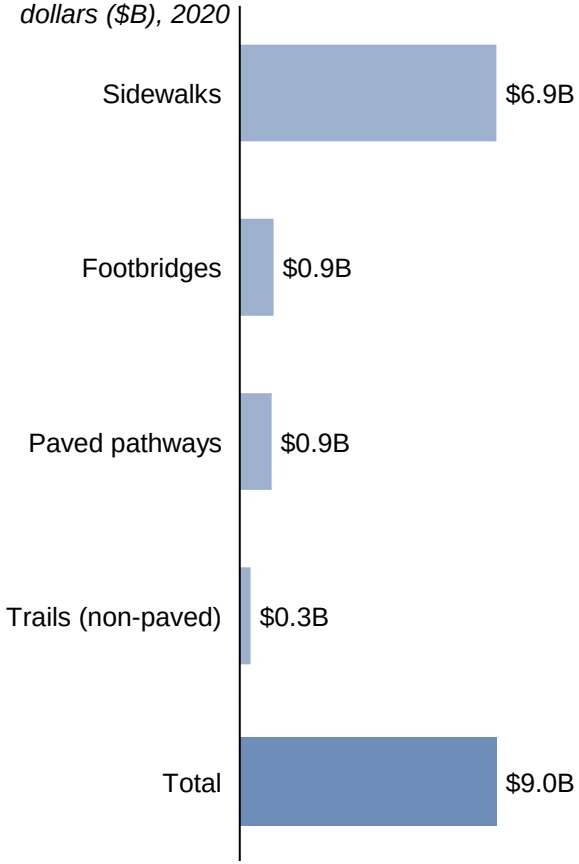
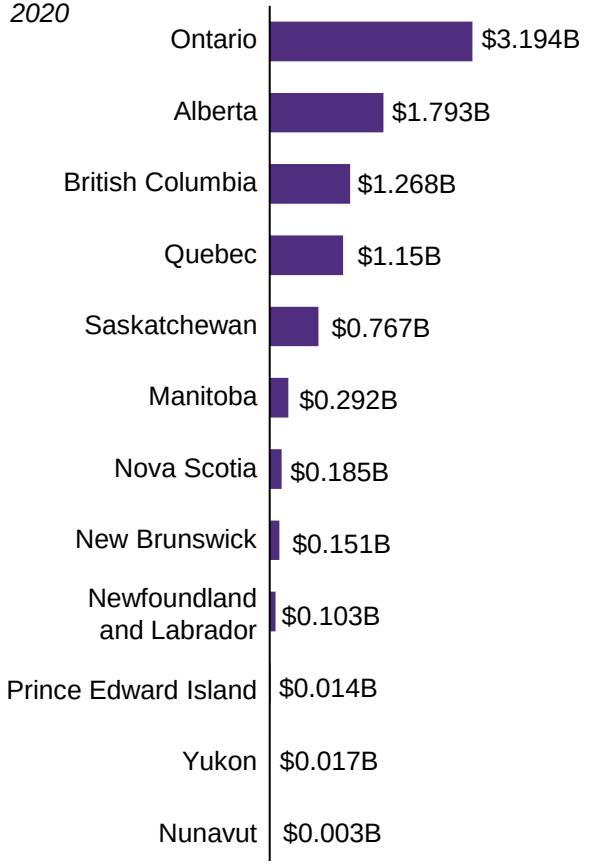


Chart 44: Estimated replacement value of active transportation infrastructure in fair, poor, or very poor condition by province and territory[1]

Provinces and territories, in billions of dollars ($B), 2020



1. Data were unreliable for the Northwest Territories.

Notes: The lack of province-specific data means that the sum of the provinces is less than the Canadian total. Sum may not add up due to rounding.

Sources: Statistics Canada (Table: 34-10-0284-01); RCGT analysis.

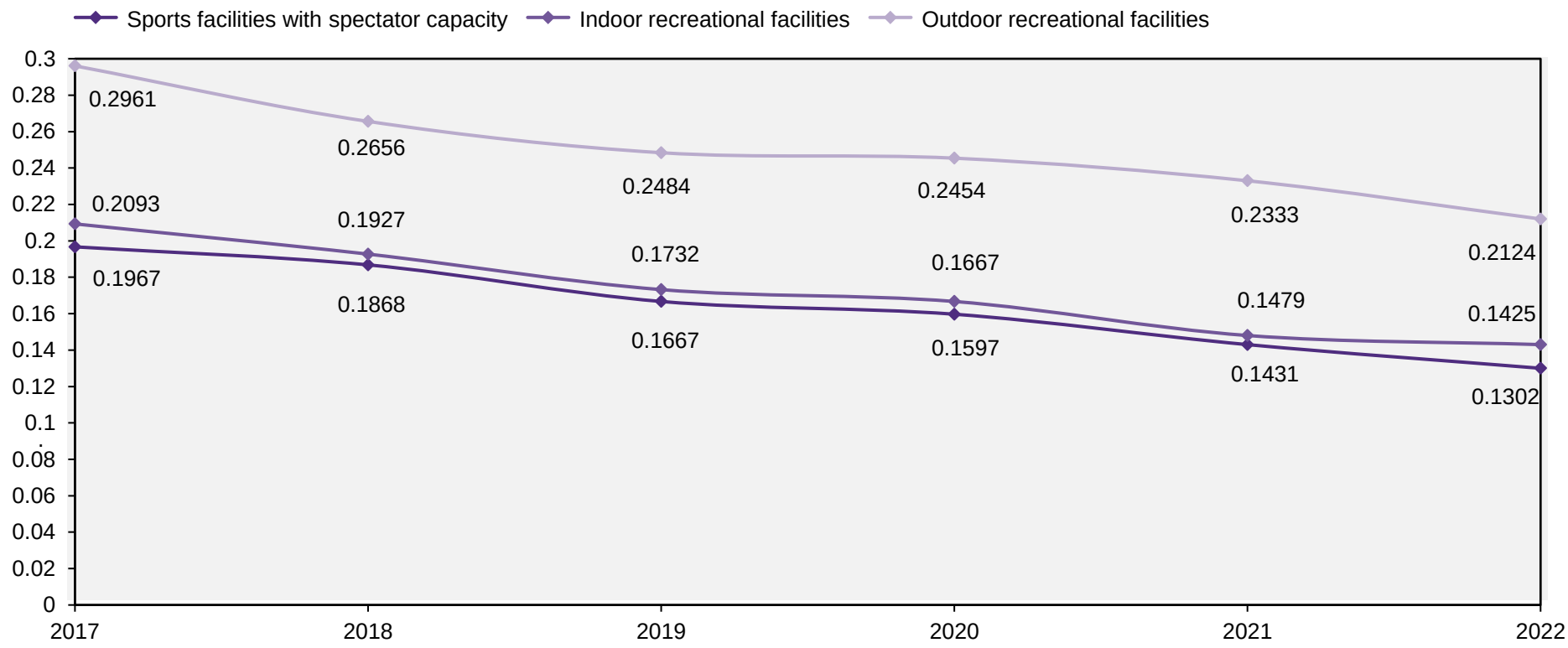
Greenhouse gas emissions per value added for sport and recreational facilities decreased between 2017 and 2022

GHG emissions per value added

In Canada, outdoor recreational facilities emit more GHG per value added (value added of the whole economy or associated economic activities) than the other sports or recreational facilities. By 2022, 0.212 tonne was emitted per thousand dollars, while sports facilities with spectator capacity and indoor recreational facilities were producing 0.143 and 0.13 tonne per thousand dollars respectively.

Chart 45: Greenhouse gas emissions per value added

Canada, by facility type, in tonnes per thousand dollars, 2017-2022



Sources: Statistics Canada (Table: 36-10-0655-01); RCGT analysis.

New Brunswick's sports and recreational facilities produce the lowest average GHG emissions in Canada

GHG emissions per value added

In 2022, GHG emissions of sports facilities with spectator capacity and indoor recreational facilities were generally the same across most provinces.

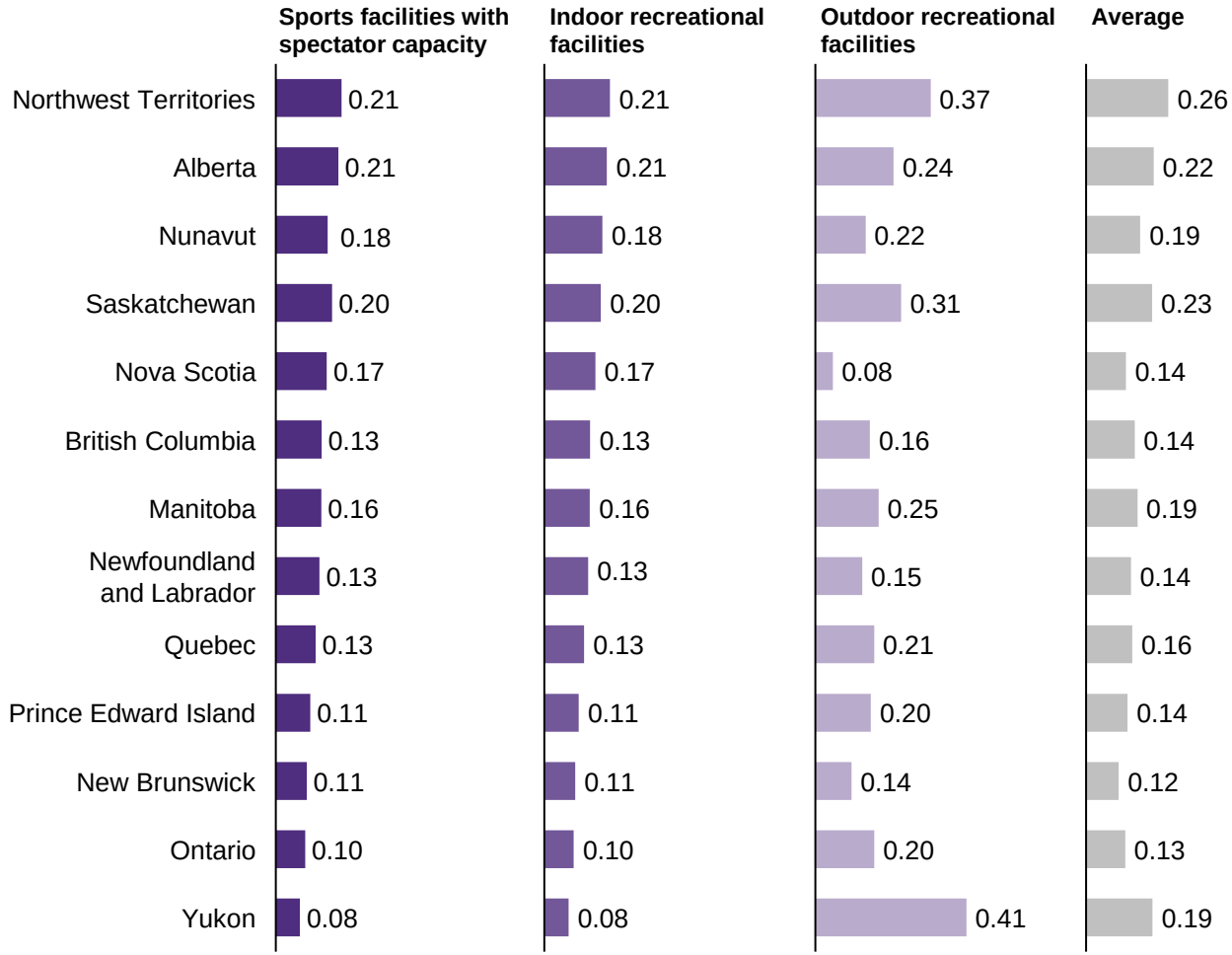
Sports and indoor recreational facilities in Yukon produced the least GHG in Canada with 0.08 tonne per thousand dollars. The highest emissions were recorded in the Northwest Territories and Alberta.

As for the outdoor recreational facilities, the GHG emissions vary between 0.08 tonne per thousand dollars in Nova Scotia to 0.41 tonne per thousand dollars in Yukon.

Ensuring that new sports and recreational facilities adhere to environmental standards is crucial in order to mitigate their GHG emissions.

Chart 46: Greenhouse gas emissions per value added by province and territory

Provinces and territories, by facility type, in tonnes per thousand dollars, 2022



Sources: Statistics Canada (Table: 36-10-0655-01); RCGT analysis.

Health impacts

The health impacts generated by SPAR in 2022 are estimated to save $3.9 billion in direct health care costs and mortality

Health impacts

Health impacts could be improved by a decrease in physical inactivity. Decreasing the number of Canadians not meeting the physical activity component of the 24-hr movement guidelines by 10 percentage points could **reduce the economic burden**…

of non-communicable diseases by
16.0%
Decrease from $3.5B to $2.9B

of non-communicable diseases by
$17 **per capita**
Decrease from $106 to $89

of mental health outcomes by
17.3%
Decrease from $409M to $338M

of mental health outcomes by
$2 **per capita**
Decrease from $12 to $10

for total diseases and conditions by
16.1%
Decrease from $3.9B to $3.3B

for total diseases and conditions by
$19 **per capita**
Decrease from $119 to $100

A decrease of 10 percentage points in physical inactivity levels among Canadians could reduce the economic burden of illnesses by **$629M** in 2022

Sport, physical activity and recreation have multiple health benefits

From health care costs averted by being physically active to mortality, SPAR has an impact on health.

Health expenditure represents 12% of Canada's GDP. The increase of Canadian physical activity could reduce the economic burden of illness.

Four indicators have been analyzed to present the health benefits of SPAR. They are categorized into three main groups:

1. Economic burden of non-communicable disease
2. Economic burden of depression
3. Impact of SPAR on general health

Health expenditures in Canada accounted for approximately 12% of the country's GDP in 2022

Health spending as part of GDP

Total health spending in Canada was $337 billion, or $8,645 per Canadian, in 2022. This represented 12% of the GDP.

Health spending as a proportion of GDP peaked in 2020 due to the beginning of the COVID-19 pandemic, reaching a high of 13.8%.

Nunavut is the jurisdiction with the highest share of health expenditure in GDP with 19% and Alberta, the one with the lowest.

It is expected that health care spending will continue to increase due to the growth and aging of the Canadian population.

Canada ranks high in the OECD[1] with the highest share of health expenditure in GDP. Hospitals, physicians and drugs spendings account for the largest shares of health dollars. Together, they represent more than half of the health expenditure in 2022.

Chart 47: Trends in the share of health spending in GDP

Canada, in % of GDP, 2017-2022

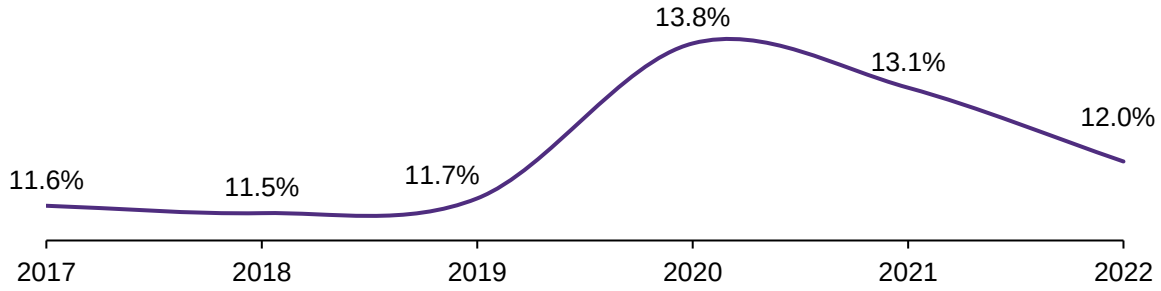
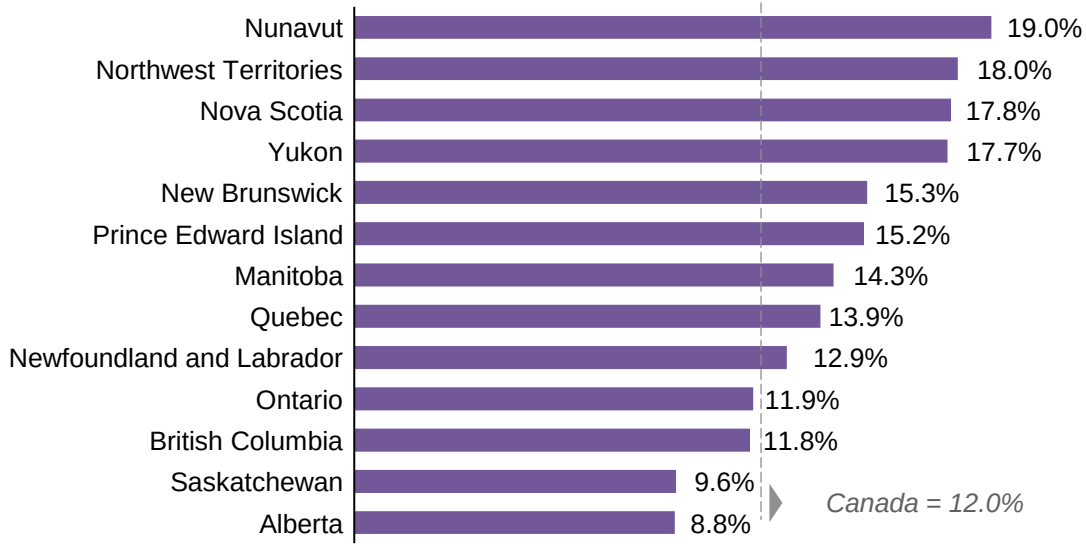


Chart 48: Percentage of health spending in GDP by province and territory

Provinces and territories, in % of GDP, 2022



Sources: Canadian Institute for Health Information, 2022; RCGT analysis. *1. Organization for Economic Co-operation and Development (OECD)*

Non-communicable diseases attributable to physical inactivity constitutes a significant economic burden

Economic burden of non-communicable diseases

Non-communicable diseases are a burden on health care systems worldwide. Governments are making considerable efforts to combat the risk factors for these diseases. Physical inactivity is the primary cause of most chronic diseases according to Booth F. et al. (2012). Hence, a high rate of physical inactivity in a population yields a considerable economic burden to society. Physical inactivity increases the chances of developing coronary heart disease (CHD), having a stroke, diabetes (Type 2), breast cancer, colon cancer, hypertension, osteoporosis or a mental health issue.

In Canada, the level of physical inactivity in the Canadian population is cause for concern. Half of adults do not meet the 2020 physical activity target recommended in the Canadian 24-Hour Movement Guidelines. Estimating the economic burden caused by physical inactivity will put a value on the impact of physical inactivity on the Canadian economy in 2022 (that is, estimating the costs that could be averted if Canadians were to adhere to the activity guidelines). Several pieces of information are required to estimate the cost of certain conditions attributable to physical inactivity:

1) the adjusted relative risk of developing a non-communicable disease by being physically inactive for the exposure group (physically inactive people) relative to the risk for the non-exposure group (physically active people);

2) the physical activity level of Canadians;

3) the Population Attributable Risk (PAR) represents the proportion of a disease's incidence in the population due to a specific factor. In this case, the specific factor is physical inactivity.

4) the economic burden of illness in Canada by type of disease. These data were published in 2010 by the Government of Canada through the Economic burden of illness in Canada (EBIC) tool, and was then indexed for 2022 based on inflation in health care services, population increases, and average earnings increase in order to provide a more accurate estimate of the current situation.

Finally, to estimate the economic burden caused by physical inactivity, the economic burden was multiplied by the PAR. This methodology is based on the work of Ding et al. (2016), Janssen (2012), Warburton et al. (2010) and Chaput et al. (2022). **The results of this analysis are presented on the next pages. They represent the direct and the mortality cost of certain chronic conditions associated with physical inactivity.**

EBIC usually presents direct and indirect costs of illness. Direct costs include hospitalization, physician costs, and pharmaceuticals. The indirect costs include the ones related to mortality and morbidity. However, morbidity data are not currently available. This suggests that the economic burden presented in the results is lower than in reality. It will be necessary to repeat the analysis when the data becomes available in order to obtain the most accurate value.

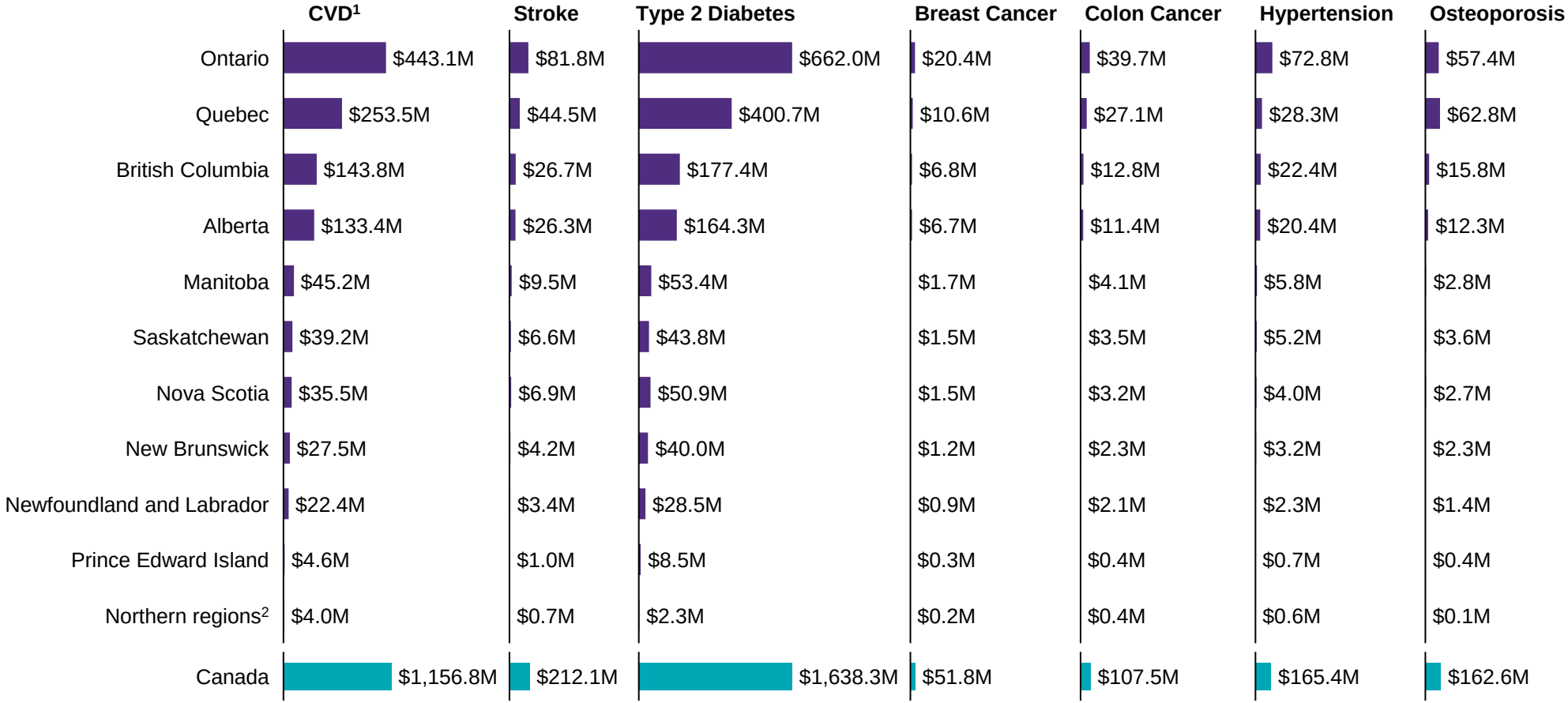
Sources: WHO (Global recommendations on physical activity for health); Booth F. et al. (2012); Centers for Disease Control and Prevention (CDC), Prince S. et al. (2020); Colley et al. Statistics Canada (How sedentary are Canadian adults? It depends on the measure, (2022); Statistics Canada (Daily physical activity and sedentary behaviour across occupational classifications in Canadian adults ,Table 2), Prince et al. (2020); Ding et al. (2016); Janssen (2012); Warburton et al. (2010); Chaput et al. (2022); RCGT analysis.

The economic burden associated with physical inactivity is highest for Type 2 diabetes

Economic burden of non-communicable diseases

Chart 49: Economic burden that could be averted if Canadians adhered to the physical activity component of the Canadian 24-Hour Movement Guidelines by type of condition **Since some diseases are interrelated, adding them together could cause double counting*

Canada, provinces and territories, in millions of dollars ($M), direct and mortality costs, 2010 indexed to 2022



Direct costs and mortality costs are presented separately on the following page.

Sources: Statistics Canada (Table: 18-10-0005-01, Table: 17-10-0005-01, Table: 11-10-0239-01, Table: 14-10-0204-01 and Table: 13-10-0821-01), Government of Canada (EBIC), Ding et al. (2016), Janssen (2012), Chaput et al. (2022), Warburton et al. (2010); RCGT analysis. / Note: Numbers may not add up due to rounding. / 1. Cardiovascular disease (CVD). / 2. The Northern regions represent the Northwest Territories, Nunavut and Yukon.

The economic burden of non-communicable diseases derives almost entirely from direct costs

Economic burden of non-communicable diseases

Chart 50: Direct and mortality costs that could be averted if Canadians adhered to the physical activity component of the Canadian 24-Hour Movement Guidelines by type of condition

Canada, provinces and territories, in millions of dollars ($M), direct and mortality costs, 2010 indexed to 2022

**Since some diseases are interrelated, adding them together would cause double counting*

Legend: Direct cost *Mortality cost*

	CVD[1]		Stroke		Type 2 Diabetes		Breast Cancer		Colon Cancer		Hypertension		Osteoporosis	
Ontario	434.2	*9.0*	80.6	*1.2*	659.4	*2.6*	18.7	*1.7*	37.8	*1.8*	72.4	*0.4*	57.4	*0.0*
Quebec	249.3	*4.2*	43.9	*0.6*	399.8	*0.8*	9.8	*0.7*	26.1	*1.0*	28.3	*0.0*	62.8	*0.0*
British Columbia	141.5	*2.3*	26.3	*0.4*	176.8	*0.6*	6.4	*0.4*	12.2	*0.6*	22.3	*0.1*	15.8	*0.0*
Alberta	130.6	*2.8*	26.0	*0.3*	163.8	*0.4*	6.4	*0.2*	10.8	*0.6*	20.3	*0.1*	12.3	*0.0*
Manitoba	44.7	*0.5*	9.4	*0.1*	53.2	*0.2*	1.6	*0.1*	4.0	*0.1*	5.8	*0.0*	2.8	*0.0*
Saskatchewan	38.8	*0.5*	6.5	*0.1*	43.7	*0.1*	1.4	*0.1*	3.4	*0.1*	5.2	*0.0*	3.6	*0.0*
Nova Scotia	35.0	*0.6*	6.9	*0.1*	50.7	*0.1*	1.5	*0.1*	3.1	*0.1*	4.0	*0.0*	2.7	*0.0*
New Brunswick	27.2	*0.3*	4.2	*0.0*	39.9	*0.1*	1.2	*0.1*	2.2	*0.1*	3.2	*0.0*	2.3	*0.0*
Newfoundland and Labrador	22.1	*0.3*	3.4	*0.0*	28.4	*0.1*	0.9	*0.0*	2.1	*0.1*	2.2	*0.0*	1.4	*0.0*
Prince Edward Island	4.5	*0.1*	1.0	*0.0*	8.5	*0.0*	0.3	*0.0*	0.4	*0.0*	0.7	*0.0*	0.4	*0.0*
Northern regions[2]	3.9	*0.1*	0.7	*0.0*	2.2	*0.0*	0.2	*0.0*	0.4	*0.0*	0.6	*0.0*	0.1	*0.0*
Canada	**1,136.2**	***20.6***	**209.3**	***2.8***	**1,633.4**	***5.0***	***48.4***	***3.3***	**103.0**	***4.5***	**164.6**	***0.8***	**162.6**	***0.0***

Sources: Statistics Canada (Table: 18-10-0005-01, Table: 17-10-0005-01, Table: 11-10-0239-01, Table: 14-10-0204-01 and Table: 13-10-0821-01), Government of Canada (EBIC), Ding et al. (2016), Janssen (2012), Chaput et al. (2022), Warburton et al. (2010); RCGT analysis. / Note: Numbers may not add up due to rounding. / 1. Cardiovascular disease (CVD). / 2. The Northern regions represent the Northwest Territories, Nunavut and Yukon.

SPAR activities improve mental health and help reduce the economic burden of depression

Economic burden of mental health outcome

Numerous studies indicate that physical activity has a positive impact on mental health. It is important, therefore, to assess the impact of physical inactivity on the economic burden of depression. An increase in the percentage of Canadians meeting the activity guidelines has the potential to reduce the economic burden.

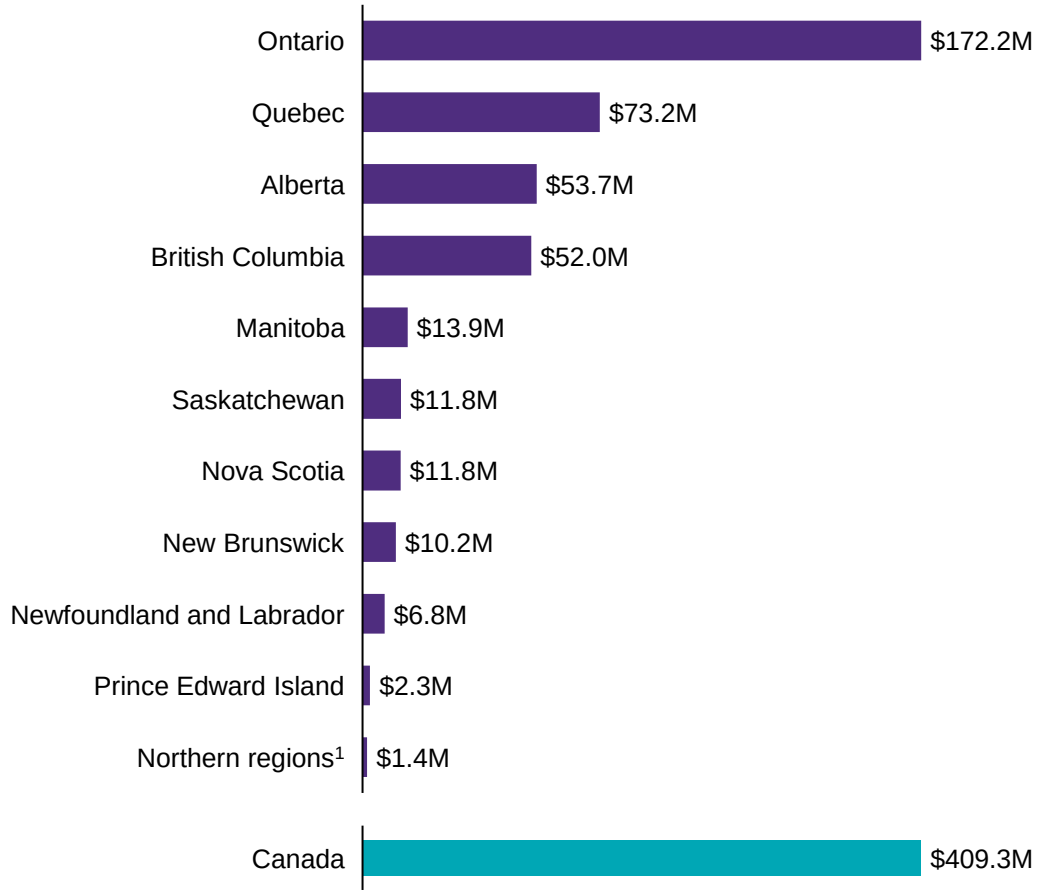
In the case of women, 15.0% of depression cases are attributed to physical inactivity. For men, this proportion is 13.7%.

In Canada, the economic burden of depression attributed to physical inactivity was $409.3 million in 2022. Ontario had the highest economic burden among the provinces at $172.2 million, followed by Quebec at $73.2 million.

The direct costs accounts for almost all the economic burden of depression attributed to physical inactivity. It amounts to $409.3 million, while the cost of mortality is $20,141.

Chart 51: Economic burden of depression attributable to physical inactivity by province and territory

Canada, provinces and territories, in millions of dollars ($M), 2010 indexed to 2022



Sources: Statistics Canada (Table: 18-10-0005-01, Table: 17-10-0005-01, Table: 11-10-0239-01, Table: 14-10-0204-01, and Table: 13-10-0821-01), Government of Canada (EBIC), Ding et al. (2016), Janssen (2012), Chaput et al. (2022), Pearce et al. (2022); RCGT analysis. Note: Numbers may not add up due to rounding. 1. The Northern regions represent the Northwest Territories, Nunavut and Yukon.

Most adults agree that SPAR contributes to a great extent to physical, mental, and social health

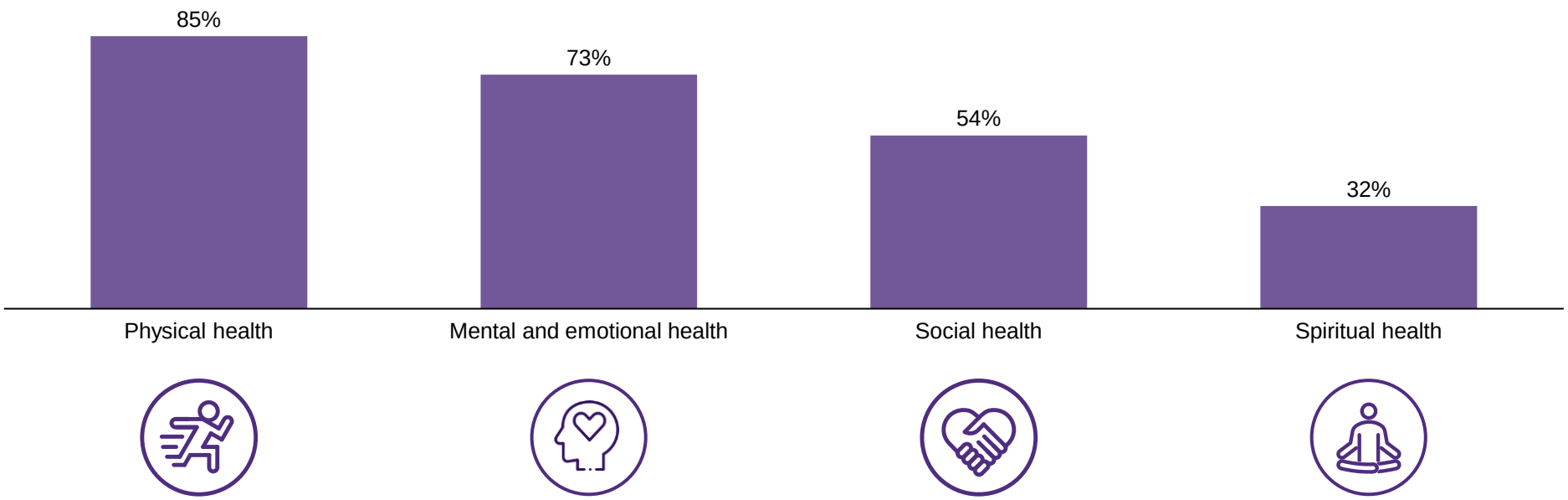
Perception that SPAR contributes to overall well-being and health

According to a 2023 CFLRI survey, an overwhelming majority of adults (85%) stated that engaging in SPAR activities contributes significantly to their physical health and well-being.

Additionally, nearly three-quarters of adults reported that physical activity has a positive impact on their mental and emotional health. Moreover, participants expressed the belief that SPAR activities contribute significantly to their social and spiritual well-being.

Chart 52: Contribution to overall well-being and health from SPAR

In % of participants, by type of benefit, CFLRI survey, 2023



Sources: CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study; RCGT analysis.

Conclusion

Details of the impacts of SPAR (1/2)

Economic and health impacts

This section provides an explanation of the total impacts of SPAR, which were introduced at the beginning of the report. While various indicators have been discussed throughout the report, the ones presented in this section were specifically used to calculate the overall impacts of SPAR.

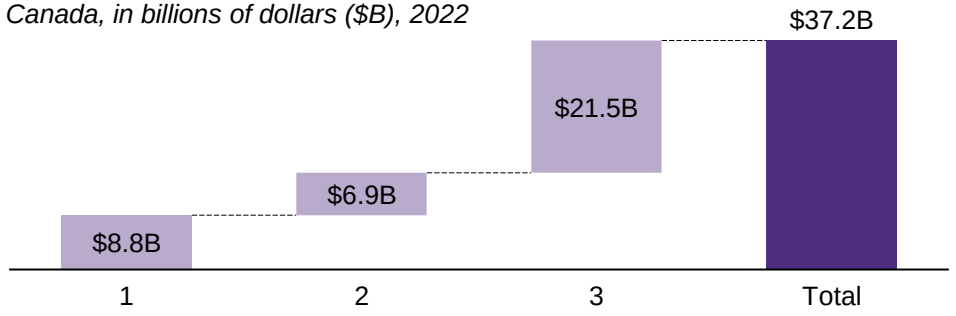
Economic impacts

Indicators taken into account

1. Amusement and recreation economic impacts
2. Sports GDP
3. Retail sales for SPAR equipment towards GDP

Economic impact of SPAR

Canada, in billions of dollars ($B), 2022



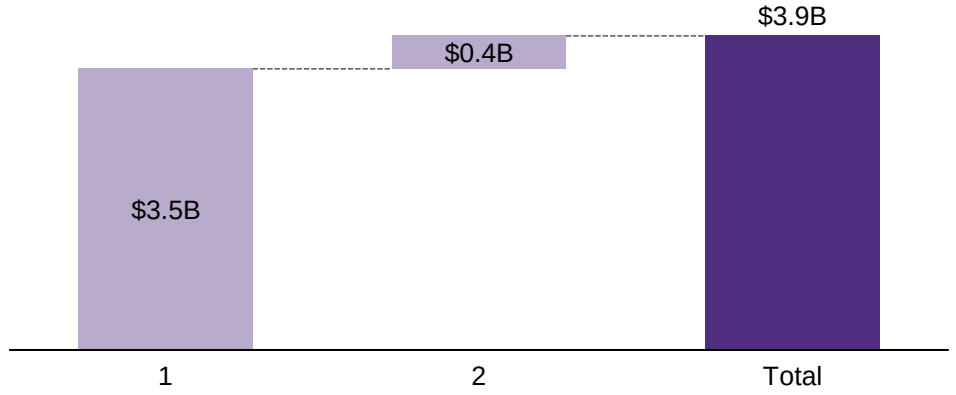
Health impacts

Indicators taken into account

1. Relative risk of noncommunicable diseases
2. Risk of depression

Health impact of SPAR

Canada, in billions of dollars ($B), 2022



Source: RCGT analysis.

Details of the impacts of SPAR (2/2)

Social and environmental impacts

Social impacts

Indicators taken into account

1 Value of volunteering

Social impact of SPAR

Canada, in billions of dollars ($B), 2020

Environmental impacts

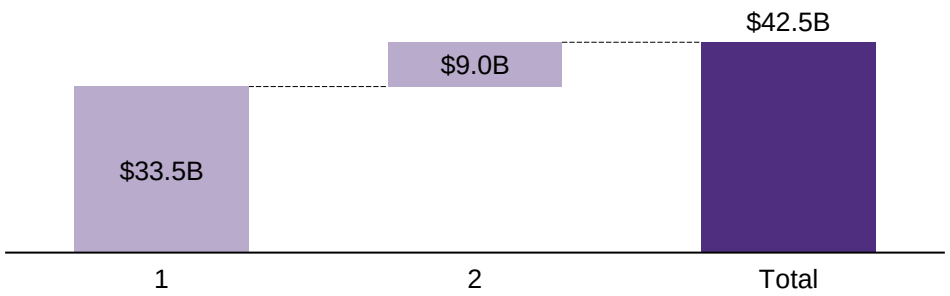
Indicators taken into account

1 Estimated replacement value of recreation and sports facilities

2 Estimated replacement value of active transportation-related infrastructure

Environmental impact of SPAR

Canada, in billions of dollars ($B), 2020



Source: RCGT analysis.

SPAR impacts exceed the economic value; they have an impact on the community

Global impacts from SPAR

As demonstrated in this report, SPAR has a range of positive impacts on different levels. These include impacts to the community sector, the personal development of active individuals, the economic advantages, and the improved air quality through the presence of forest cover, just to name a few.

At the **economic level**, SPAR activities generate spin-off benefits, while government investment also contribute to the economic impact of SPAR in Canadian communities.

Health impacts are mainly based on the cost savings generated by the Canadian population being physically active (as they related to specific non-communicable diseases, and depression). Additionally, SPAR contributes to physical and mental well-being.

The social impacts are diverse. As presented, they increase life skills that impact social behaviours, they have the potential to reduce crime participation and increase community engagement. Volunteering is also an important social impact of SPAR.

The environmental impact is due in part to the reduction of air pollution through the presence of parks and trees. It is crucial, therefore, to maintain tree cover in all Canadian cities. Additionally, the presence of active transportation infrastructure also has the potential to provide environmental benefits.

Source: RCGT analysis.

Methodology

Economic impact analysis

Chart	Source	Methodology
Chart 1: SPAR sector value by province	Statistics Canada. Table: 21-10-0057-01	Presentation of data from Statistics Canada
Chart 2: Trends in the SPAR sector value in Canada	Statistics Canada. Table: 21-10-0057-01	Presentation of data from Statistics Canada
Chart 3: Trends in SPAR operating profit margin	Statistics Canada. Table: 21-10-0057-01	Presentation of data from Statistics Canada
Chart 4: Operating profit margin by province and territory	Statistics Canada. Table: 21-10-0057-01	Presentation of data from Statistics Canada
Chart 5: Operating profit margin by OARI industry	Statistics Canada. Table: 21-10-0057-01	Presentation of data from Statistics Canada
Chart 6: Comparison of operating profit margins among sectors	Statistics Canada. Table: 13-10-0101-01 Statistics Canada. Table: 13-10-0102-01 Statistics Canada. Table: 21-10-0171-01 Statistics Canada. Table: 21-10-0169-01 Statistics Canada. Table: 33-10-0102-01 Statistics Canada. Table: 21-10-0057-01	Presentation of data from Statistics Canada
Chart 7: Amusement and recreation economic impacts	Statistics Canada. Table: 36-10-0487-01 Statistics Canada. Table: 18-10-0005-01 Statistics Canada. Table: 36-10-0594-01 Statistics Canada. Table: 36-10-0595-01 Statistics Canada. Table: 21-10-0057-01	Operating revenue of Other amusement and recreation industries in 2019 * Variations in production without inflation between 2019 and 2022 * (1 + CPI variation between 2019 and 2022) * Input-output multiplier for Amusement and recreation industries
Chart 8: Trends in sports GDP by category	Statistics Canada. Table: 36-10-0652-01 Statistics Canada. Table: 36-10-0452-01 Statistics Canada. Table: 36-10-0222-01	% of total culture and sport GDP = Sports GDP / Culture and sport GDP * 100 % of Canada's global GDP = Sports GDP / Gross domestic product at market prices * 100

Methodology

Economic impact analysis

Chart	Source	Methodology
Chart 9: Trends in sports GDP	Statistics Canada. Table: 36-10-0222-01 Statistics Canada. Table: 36-10-0452-01 Statistics Canada. Table: 36-10-0652-01	Presentation of data from Statistics Canada
Chart 10: Trends in sports GDP as part of overall GDP	Statistics Canada. Table: 36-10-0222-01 Statistics Canada. Table: 36-10-0452-01 Statistics Canada. Table: 36-10-0652-01	Presentation of data from Statistics Canada Sports GDP as part of overall GDP = sports GDP / overall GDP * 100
Chart 11: Sports GDP by province and territory	Statistics Canada. Table: 36-10-0452-01	Presentation of data from Statistics Canada
Chart 12: Trends in the number of jobs in the SPAR sectors in Canada	Statistics Canada. Table: 14-10-0202-01 Statistics Canada. Table: 36-10-0652-01	Presentation of data from Statistics Canada Average of quarterly data
Chart 13: Average hourly earnings in the OARI sector	Statistics Canada. Table: 14-10-0205-01 Statistics Canada. Table: 14-10-0209-01	Presentation of data from Statistics Canada Average of monthly data
Chart 14: Number of jobs and average annual growth rate in OARI	Statistics Canada. Table: 14-10-0202-01	Presentation of data from Statistics Canada Calculation of the average annual growth rate (AAGR) AAGR = ((2022 data / 2017 data) ^ (1/5) - 1) * 100
Chart 15: Value of sport tourism	2019 Sport Tourism Visitor Impact Report, Sport Tourism Canada	Presentation of data from Statistics Canada and Sport Tourism Canada
Chart 16: Recreation and entertainment GDP generated by tourism	Statistics Canada. Table: 24-10-0042-01	Presentation of data from Statistics Canada
Chart 17: Reasons for not registering children in community sports in Canada	CCES 2021 Community Sport Survey	Presentation of data from Canadian Centre for Ethics in Sport

Methodology

Economic impact analysis

Chart	Source	Methodology
Chart 18: Retail trade from sporting equipment, athletic footwear and recreational vehicles	Statistics Canada. Table: 20-10-0016-01 Statistics Canada. Table: 36-10-0594-01	Presentation of data from Statistics Canada GDP calculation: Retail sales * multiplier

Methodology

Social impact analysis

Chart	Source	Methodology
Chart 19: Volunteering in sport by age	CFLRI. 2020 Sport Monitor (Adult focus) Statistics Canada. Census 2016 Statistics Canada. Table: 36-10-0676-01	Presentation of data from CFLRI and Statistics Canada Value of volunteering = Population * Average number of hours volunteering for sport * Average % of population volunteering for sport * Average part-time hourly wage for amusement and recreational industry
Chart 20: Perception of contribution of SPAR on the community	CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study	Presentation of data from CFLRI
Chart 21: Contribution of SPAR volunteering	CFLRI 2020 Sport Monitor	Presentation of data from CFLRI
Chart 22: Contribution of SPAR to social behaviours	CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study	Presentation of data from CFLRI

Methodology

Environmental impact analysis

Chart	Source	Methodology
Chart 23: Average urban greenness by population centre size	Statistics Canada. Table: 38-10-0158-01 Statistics Canada. Urban greenness, 2001, 2011 and 2019.	Presentation of data from Statistics Canada
Chart 24: Change in type of urban greenness between 2001 and 2019	Statistics Canada. Urban greenness, 2001, 2011 and 2019.	Presentation of data from Statistics Canada
Chart 25: Average urban greenness by province	Statistics Canada. Table: 38-10-0158-01	Presentation of data from Statistics Canada
Chart 26: Summary of ACTIVE results	Chapman et al. (2018)	Summary of results of article
Chart 27: Costs and benefits of an intervention to increase cycling and walking	Chapman et al. (2018)	Summary of results of article
Chart 28: Cost of transport incidents by injury outcome for pedestrians and cyclists	Statistics Canada. Table: 18-10-0005-01 Parachute (2021) *The highest costs: Falls and transport.*	Total cost of incidents by injury outcome for pedestrians and cyclists = Total cost of incidents by injury outcome for pedestrians and cyclists in 2018 * Inflation between 2018 and 2022
Chart 29: Presence and use of public transit system in community	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.	Presentation of data from CFLRI
Chart 30: Presence of a public transport system	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey	Presentation of data from CFLRI

Methodology

Environmental impact analysis

Chart	Source	Methodology
Chart 31: Communities with bicycle infrastructure by type	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey (communities with at least 1,000 residents)	Presentation of data from CFLRI
Chart 32: Formal plans for active transportation	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey (communities with at least 1,000 residents)	Presentation of data from CFLRI
Chart 33: Communities with active transportation supports by type	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey (communities with at least 1,000 residents)	Presentation of data from CFLRI
Chart 34: Park and green space visits by residents	Statistics Canada. Table: 38-10-0020-01	Presentation of data from Statistics Canada
Chart 35: Impact of environmental effects of climate change on the ability to participate in SPAR	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.	Presentation of data from CFLRI
Chart 36: Number of visits to SPAR facilities	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.	Presentation of data from CFLRI
Chart 37: Level of satisfaction with the accessibility of the SPAR facilities to people to participate comfortably by type of specificity	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.	Presentation of data from CFLRI
Chart 38: Availability of safe SPAR opportunities	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.	Presentation of data from CFLRI
Chart 39: Proximity of SPAR facilities to household	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.	Presentation of data from CFLRI

Methodology

Environmental impact analysis

Chart	Source	Methodology
Chart 40: Level of satisfaction with the quality of SPAR infrastructure and programming	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.	Presentation of data from CFLRI
Chart 41: Estimated replacement value of recreation and sports facilities in fair, poor, or very poor condition in Canada	Statistics Canada. Table: 34-10-0284-01.	Presentation of data from Statistics Canada
Chart 42: Estimated replacement value of recreation and sports facilities in fair, poor, or very poor condition by province and territory	Statistics Canada. Table: 34-10-0284-01.	Presentation of data from Statistics Canada
Chart 43: Estimated replacement value of active transportation infrastructure in fair, poor, or very poor condition in Canada	Statistics Canada. Table: 34-10-0284-01.	Presentation of data from Statistics Canada
Chart 44: Estimated replacement value of active transportation infrastructure in fair, poor, or very poor condition by province and territory	Statistics Canada. Table: 34-10-0284-01.	Presentation of data from Statistics Canada
Chart 45: Greenhouse gas emissions per value added	Statistics Canada. Table: 36-10-0655-01	Presentation of data from Statistics Canada
Chart 46: Greenhouse gas emissions per value added by province and territory	Statistics Canada. Table: 36-10-0655-01	Presentation of data from Statistics Canada Average of the greenhouse gas emissions per value added of the three types of infrastructure

Methodology

Health impact analysis

Chart	Source	Methodology
Chart 47: Trends in the share of health spending in GDP	National health expenditure trends, 2022 — Snapshot . Canadian Institute for Health Information.	Presentation of data from Canadian Institute for Health Information
Chart 48: Percentage of health spending in GDP by province and territory	National health expenditure trends, 2022 — Snapshot . Canadian Institute for Health Information.	Presentation of data from Canadian Institute for Health Information
Chart 49: Economic burden that could be averted if Canadians adhered to the physical activity component of the Canadian 24-Hour Movement Guidelines by type of condition	Government of Canada. EBIC. Statistics Canada. Table: 18-10-0005-01 Statistics Canada. Table: 17-10-0005-01 Statistics Canada. Table: 11-10-0239-01 Statistics Canada. Table: 14-10-0204-01 Statistics Canada. Table: 13-10-0821-01 Ding et al. (2016) Janssen (2012) Chaput et al. (2022) Warburton et al. (2010)	Presented on page 69
Chart 50: Direct and mortality costs that could be averted if Canadians adhered to the physical activity component of the Canadian 24-Hour Movement Guidelines by type of condition	Government of Canada. EBIC. Statistics Canada. Table: 18-10-0005-01 Statistics Canada. Table: 17-10-0005-01 Statistics Canada. Table: 11-10-0239-01 Statistics Canada. Table: 14-10-0204-01 Statistics Canada. Table: 13-10-0821-01 Ding et al. (2016) Janssen (2012) Chaput et al. (2022) Warburton et al. (2010)	Presented on page 70

Methodology

Health impact analysis

Chart	Source	Methodology
Chart 51: Economic burden of depression attributable to physical inactivity by province and territory	Government of Canada. EBIC. Statistics Canada. Table: 18-10-0005-01 Statistics Canada. Table: 17-10-0005-01 Statistics Canada. Table: 11-10-0239-01 Statistics Canada. Table: 14-10-0204-01 Statistics Canada. Table: 13-10-0821-01 Ding et al. (2016) Janssen (2012) Chaput et al. (2022) Pearce et al. (2022)	Same methodology as Chart 49
Chart 52: Contribution to overall well-being and health from SPAR	CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study	Presentation of data from CFLRI

Appendix

- **Bibliography**

Bibliography

Economic impact

Chart	Reference
Chart 1: SPAR sector value by province	Statistics Canada. Table: 21-10-0057-01 Amusement and recreation, summary statistics [Release date: 2024-11-04]
Chart 2: Trends in the SPAR sector value in Canada	Statistics Canada. Table: 21-10-0057-01 Amusement and recreation, summary statistics [Release date: 2024-11-04]
Chart 3: Trends in SPAR operating profit margin	Statistics Canada. Table: 21-10-0057-01 Amusement and recreation, summary statistics [Release date: 2024-11-04]
Chart 4: Operating profit margin by province and territory	Statistics Canada. Table: 21-10-0057-01 Amusement and recreation, summary statistics [Release date: 2024-11-04]
Chart 5: Operating profit margin by OARI industry	Statistics Canada. Table: 21-10-0057-01 Amusement and recreation, summary statistics [Release date: 2024-11-04]
Chart 6: Comparison of operating profit margins among sectors	Statistics Canada. Table: 13-10-0102-01 Private nursing and residential care facilities, summary statistics [Release date: 2025-03-25] Statistics Canada. Table: 21-10-0171-01 Food services and drinking places, summary statistics [Release date: 2025-02-18] Statistics Canada. Table: 21-10-0169-01 Spectator sports, event promoters, artists and related industries, summary statistics [Release date: 2025-02-07] Statistics Canada. Table: 33-10-0102-01 Accommodation services, summary statistics [Release date: 2024-12-02] Statistics Canada. Table: 21-10-0057-01 Amusement and recreation, summary statistics [Release date: 2024-11-04]

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Chart	Reference
Chart 7: Amusement and recreation economic impacts	Statistics Canada. Table 36-10-0594-01 Input-output multipliers, detail level [Release date: 2024-11-14] Statistics Canada. Table: 36-10-0595-01 Input-output multipliers, provincial and territorial, detail level [Release date: 2024-11-14] Statistics Canada. Table: 21-10-0057-01 Amusement and recreation, summary statistics [Release date: 2024-11-04]
Chart 8: Trends in sports GDP by category	Statistics Canada. Table: 36-10-0652-01 National culture and sport indicators by domain and sub-domain (x 1,000) [Release date: 2025-01-14] Statistics Canada. Table: 36-10-0452-01 Culture and sport indicators by domain and sub-domain, by province and territory, product perspective (x 1,000) [Release date: 2024-06-03] Statistics Canada. Table: 36-10-0222-01 Gross domestic product, expenditure-based, provincial and territorial, annual (x 1,000,000) [Release date: 2024-11-07]
Chart 9: Trends in sports GDP	Statistics Canada. Table: 36-10-0452-01 Culture and sport indicators by domain and sub-domain, by province and territory, product perspective (x 1,000) [Release date: 2024-06-03] Statistics Canada. Table: 36-10-0222-01 Gross domestic product, expenditure-based, provincial and territorial, annual (x 1,000,000) [Release date: 2024-11-07]
Chart 10: Trends in sports GDP as part of overall GDP	Statistics Canada. Table: 36-10-0452-01 Culture and sport indicators by domain and sub-domain, by province and territory, product perspective (x 1,000) [Release date: 2024-06-03] Statistics Canada. Table: 36-10-0222-01 Gross domestic product, expenditure-based, provincial and territorial, annual (x 1,000,000) [Release date: 2024-11-07]
Chart 11: Sports GDP by province and territory	Statistics Canada. Table: 36-10-0452-01 Culture and sport indicators by domain and sub-domain, by province and territory, product perspective (x 1,000) [Release date: 2024-06-03]

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Chart	Reference
Chart 12: Trends in the number of jobs in the SPAR sectors in Canada	Statistics Canada. Table: 14-10-0205-01 Average hourly earnings for employees paid by the hour, by industry, monthly, unadjusted for seasonality [Release date: 2023-04-27] Statistics Canada. Table: 14-10-0209-01 Average hourly earnings (including overtime) for salaried employees, by industry, monthly, unadjusted for seasonality [Release date: 2023-04-27]
Chart 13: Average hourly earnings in the OARI sector	Statistics Canada. Table: 14-10-0205-01 Average hourly earnings for employees paid by the hour, by industry, monthly, unadjusted for seasonality [Release date: 2023-04-27] Statistics Canada. Table: 14-10-0209-01 Average hourly earnings (including overtime) for salaried employees, by industry, monthly, unadjusted for seasonality [Release date: 2023-04-27]
Chart 14: Number of jobs and average annual growth rate in OARI	Statistics Canada. Table: 14-10-0202-01 Employment by industry, annual [Release date: 2023-03-30]
Chart 15: Value of sport tourism	Sport Tourism Canada. *2019 Sport Tourism Visitor Impact Report.* https://www.sporttourismcanada.com/value-of-sport-tourism-in-2019-tops-7-billion/ [June 2023]
Chart 16: Recreation and entertainment GDP generated by tourism	Statistics Canada. Table: 24-10-0042-01 Provincial and territorial gross domestic product (GDP) and employment generated by tourism and related measures (x 1,000,000) [Release date: 2023-02-24]
Chart 17: Reasons for not registering children in community sports in Canada	Canadian Centre for Ethics in Sport (CCES), 2021 Community Sport Survey. https://cces.ca/sites/default/files/content/docs/2024-08/ccesreport2021-final-e-v2_0.pdf [Dec 2024].
Chart 18: Retail trade from sporting equipment, athletic footwear and recreational vehicles	Statistics Canada. Table: 20-10-0016-01 Retail commodity survey, retail sales (x 1,000) [Release date: 2023-02-28] Statistics Canada. Table: 36-10-0594-01 Input-output multipliers, detail level [Release date: 2022-12-13]

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Chart 19: Volunteering in sport by age	CFLRI. 2020 Sport Monitor (Adult focus) https://cflri.ca/wp-content/uploads/2024/03/CFLRI-TrackingTheField-Sport-Monitor-Volunteering-EN-Final.pdf [March 2023] Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016008. [July 2023] Statistics Canada. Table: 36-10-0676-01 Labour statistics consistent with the System of Provincial and Territorial Economic Accounts, by industry, job category and work schedule (full-time or part-time) [Release date: 2023-05-19]
Chart 20: Perception of contribution of SPAR on the community	CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study
Chart 21: Contribution of SPAR volunteering	CFLRI. 2020 Sport Monitor (Adult focus)
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Chart 22: Contribution of SPAR to social behaviours	CFLRI 2023 Social, health, environmental, economic impact related to sport, physical activity and recreation study

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Chart	Reference
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Chart 23: Average urban greenness by population centre size	Statistics Canada. Table: 38-10-0158-01 Urban greenness and normalized difference vegetation index by 2021 population centre [Release date: 2022-11-17] Statistics Canada. Urban greenness, 2001, 2011 and 2019. https://www150.statcan.gc.ca/n1/pub/16-002-x/2021001/article/00002-eng.htm [March 2023] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3810015801&cubeTimeFrame.startYear=2018&cubeTimeFrame.endYear=2022&referencePeriods=20180101%2C20220101 [Release date: 2024-11-21]
Chart 24: Change in type of urban greenness between 2001 and 2019	Statistics Canada. Urban greenness, 2001, 2011 and 2019. https://www150.statcan.gc.ca/n1/pub/16-002-x/2021001/article/00002-eng.htm [March 2023] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3810015801&cubeTimeFrame.startYear=2018&cubeTimeFrame.endYear=2022&referencePeriods=20180101%2C20220101 [Release date: 2024-11-21]
Chart 25: Average urban greenness by province	Statistics Canada. Table: 38-10-0158-01 Urban greenness and normalized difference vegetation index by 2021 population centre [Release date: 2022-11-17] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3810015801&cubeTimeFrame.startYear=2018&cubeTimeFrame.endYear=2022&referencePeriods=20180101%2C20220101 [Release date: 2024-11-21]
Chart 26: Summary of ACTIVE results	Chapman et al. (2018) – Chapman et al. A Cost Benefit Analysis of an Active Travel Intervention with Health and Carbon Emission Reduction Benefits. *International Journal of Environmental Research and Public Health* **15**, (2018).
Chart 27: Costs and benefits of an intervention to increase cycling and walking	Chapman et al. (2018) – Chapman et al. A Cost Benefit Analysis of an Active Travel Intervention with Health and Carbon Emission Reduction Benefits. *International Journal of Environmental Research and Public Health* **15**, (2018).
Chart 28: Cost of transport incidents by injury outcome for pedestrians and cyclists	Statistics Canada. Table: 18-10-0005-01 Consumer Price Index, annual average, not seasonally adjusted [Release date: 2023-01-17] Parachute. The highest costs: Falls and transport. https://parachute.ca/en/professional-resource/cost-of-injury-in-canada/the-highest-costs-falls-and-transport/ [July 2023]

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Chart	Reference
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Chart 29: Presence and use of public transit system in community	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.
Chart 30: Presence of a public transport system	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey
Chart 31: Communities with bicycle infrastructure by type	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey
Chart 32: Formal plans for active transportation	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey
Chart 33: Communities with active transportation supports by type	CFLRI 2020-2021 Opportunities for Physical Activity in Canadian Communities survey
Chart 34: Park and green space visits by residents	Statistics Canada. Table: 38-10-0020-01 Parks and green spaces [Release date: 2023-04-24]
Chart 35: Impact of environmental effects of climate change on the ability to participate in SPAR	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.

Bibliography

Environmental impact

Chart	Reference
Chart 36: Number of visits to SPAR facilities	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.
Chart 37: Level of satisfaction with the accessibility of the SPAR facilities to people to participate comfortably by type of specificity	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.
Chart 38: Availability of safe SPAR opportunities	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.
Chart 39: Proximity of SPAR facilities to household	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.
Chart 40: Level of satisfaction with the quality of SPAR infrastructure and programming	CFLRI, 2023, Social, health, environmental, economic impact related to sport, physical activity and recreation study.
Chart 41: Estimated replacement value of recreation and sports facilities in fair, poor, or very poor condition in Canada	Statistics Canada. Table: 34-10-0284-01 Estimated replacement value of core public infrastructure assets, by physical condition rating (x 1,000,000) [Release date: 2025-02-04]
Chart 42: Estimated replacement value of recreation and sports facilities in fair, poor, or very poor condition by province and territory	Statistics Canada. Table: 34-10-0284-01 Estimated replacement value of core public infrastructure assets, by physical condition rating (x 1,000,000) [Release date: 2025-02-04]
Chart 43: Estimated replacement value of active transportation infrastructure in fair, poor, or very poor condition in Canada	Statistics Canada. Table: 34-10-0284-01 Estimated replacement value of core public infrastructure assets, by physical condition rating (x 1,000,000) [Release date: 2025-02-04]

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Chart 45: Greenhouse gas emissions per value added	Statistics Canada. Table: 36-10-0655-01 Infrastructure Economic Accounts, Environmental Perspective [Release date: 2025-03-14]
Chart 46: Greenhouse gas emissions per value added by province and territory	Statistics Canada. Table: 36-10-0655-01 Infrastructure Economic Accounts, Environmental Perspective [Release date: 2025-03-14]

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Chart 47: Trends in the share of health spending in GDP	Canadian Institute for Health Information. National health expenditure trends, 2022 — Snapshot . *https://www.cihi.ca/en/national-health-expenditure-trends-2022-snapshot#:~:text=Total%20health%20expenditure%20in%202022,2020%20and%207.6%25%20in%202021* [March 2023] https://www.cihi.ca/en/national-health-expenditure-trends#data-tables (Table B.1.3 Total health expenditure as a percentage of provincial/territorial GDP by province/territory and Canada, 1975 to 2024 - April 2025)
Chart 48: Percentage of health spending in GDP by province and territory	Canadian Institute for Health Information. National health expenditure trends, 2022 — Snapshot . *https://www.cihi.ca/en/national-health-expenditure-trends-2022-snapshot#:~:text=Total%20health%20expenditure%20in%202022,2020%20and%207.6%25%20in%202021* [March 2023] https://www.cihi.ca/en/national-health-expenditure-trends#data-tables (Table B.1.3 Total health expenditure as a percentage of provincial/territorial GDP by province/territory and Canada, 1975 to 2024 - April 2025)
Chart 49: Economic burden that could be averted if Canadians adhered to the physical activity component of the Canadian 24-Hour Movement Guidelines by type of condition	Government of Canada. Economic Burden of Illness in Canada (EBIC). https://cost-illness.canada.ca/index.php?lang=eng. [June 2023] Statistics Canada. Table: 18-10-0005-01 Consumer Price Index, annual average, not seasonally adjusted [Release date: 2023-01-17] Statistics Canada. Table: 17-10-0005-01 Population estimates on July 1st, by age and sex [Release date: 2022-12-21] Statistics Canada. Table: 11-10-0239-01 Income of individuals by age group, sex and income source, Canada, provinces and selected census metropolitan areas [Release date: 2023-05-02]
Chart 50: Direct and mortality costs that could be averted if Canadians adhered to the physical activity component of the Canadian 24-Hour Movement Guidelines by type of condition	Statistics Canada. Table 14-10-0204-01 Average weekly earnings by industry, annual [Release date: 2023-03-30] Statistics Canada. Table: 13-10-0821-01 Household population meeting/not meeting the 2020 Canadian physical activity guidelines [Release date: 2021-09-01] Ding et al. (2016) – Ding, D et al. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. *Lancet* **388**, 1311-1324 (2016). Janssen (2012) – Janssen, I. Health care costs of physical inactivity in Canadian adults. *Appl Physiol Nutr Metab* **37,** 803-806 (2012). Chaput et al. (2022) – Chaput et al. Economic burden of excessive sedentary behaviour in Canada. *Canadian Journal of Public Health* (2022). Warburton et al. (2010) – Warburton et al. A systematic review of the evidence for Canada's Physical Activity Guidelines for Adults. *Int J Behav Nutr Phys Act* (2010).

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