

TRACKING PROGRESS 2016

Nova Scotia Sustainable Transportation Indicators

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In 2016, the Tracking Progress study estimated seven indicators through the household-level Nova Scotia Travel Activity (NovaTRAC) survey and emission modelling. The NovaTRAC 2016 survey was conducted between July and December. The survey required respondents to provide their household travel information for a 24-hour period. The survey responses were geocoded to determine the travel patterns, and were also used to develop energy use and emission estimates for the Province. A transport network model was developed for the Halifax Regional Municipality (HRM). Emission factors were used to estimate fuel consumption, greenhouse gas (GHG) emissions and criteria pollutants from the passenger transport sector.

Travel Choices and Behaviour

- How Nova Scotians choose to move
- How far they travel

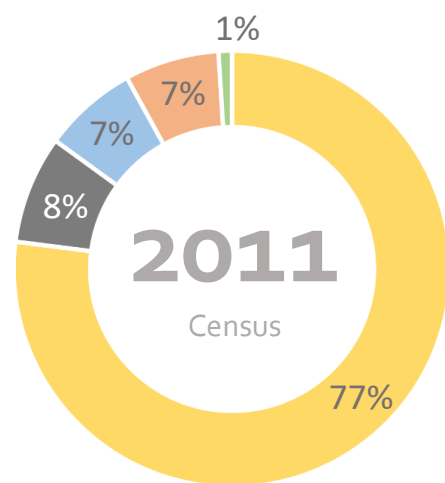
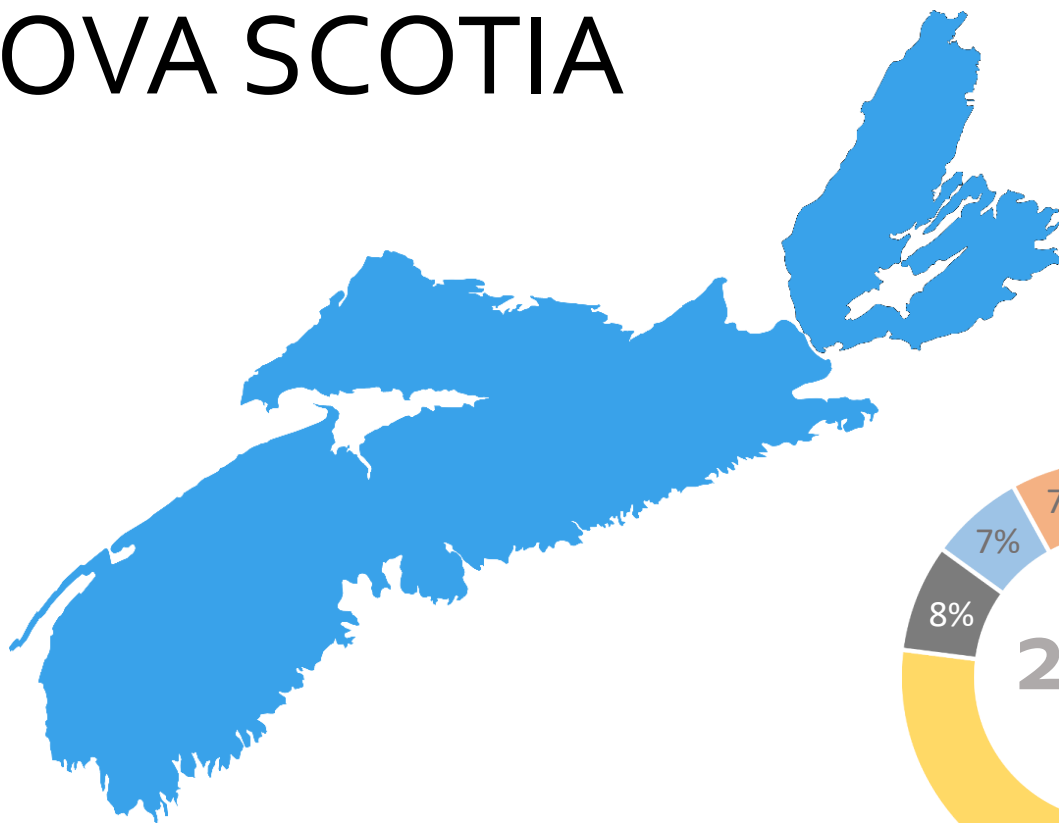
Energy Use and Emissions

- How much fuel Nova Scotians use for transportation
- How much vehicle emissions are emitted

The indicators are listed below:

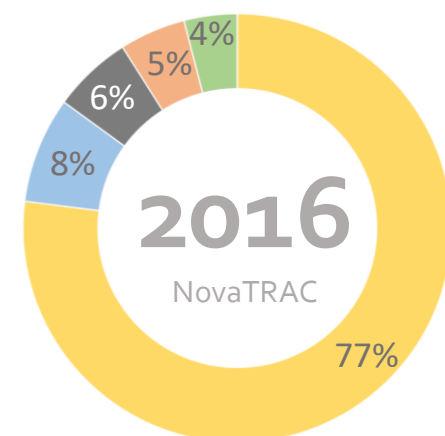
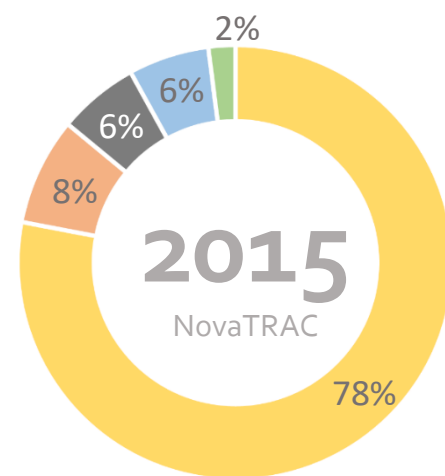
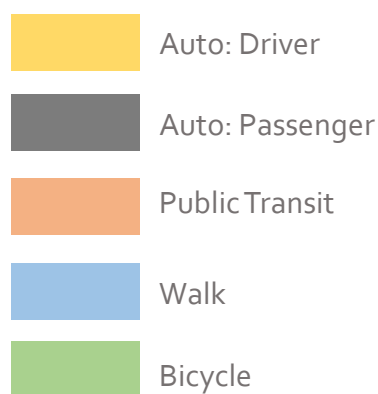
Focus Area	Indicators	Data source	Baseline
Travel Choices and Behaviour	1. Modal share of work trips (%)	NovaTRAC 2016	NovaTRAC 2015
	2. Modal share for non-work trips (i.e. shopping, recreation and entertainment, etc.)	NovaTRAC 2016	NovaTRAC 2015
	3. Total distance traveled per person by trip purposes (in km)	NovaTRAC 2016	NovaTRAC 2015
	4. Average daily travel time per person (in minutes)	NovaTRAC 2016	NovaTRAC 2015
Energy Use and Emissions	5. Fuel consumption for passenger transport per capita	Multi-source, Estimation	2015 Emission Study
	6. GHG emissions per capita and total amount	Multi-source, Estimation	2015 Emission Study
	7. Amount of criteria pollutants from passenger transport	Multi-source, Estimation	2015 Emission Study

NOVA SCOTIA



Travel Choices and Behaviour

1 Modal Share of Work Trips (%)



*Data source: NovaTRAC 2015 and 2016 (Statistics Canada 2011 census data for comparison)

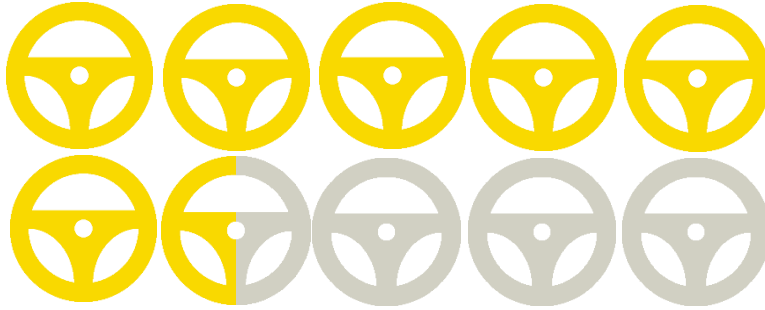
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Modal Share for Non-Work Trips (%)

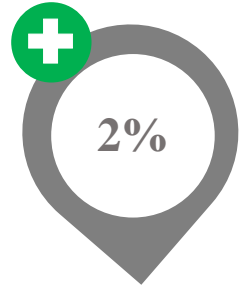
Auto: Driver

2016

65%



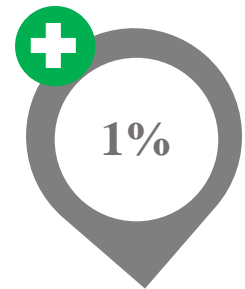
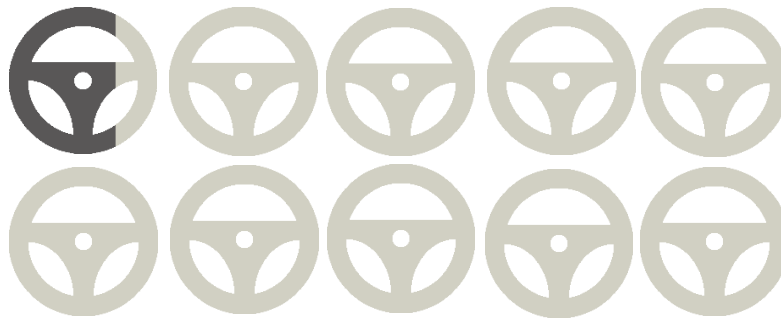
% Difference 2015-2016



Auto: Passenger

2016

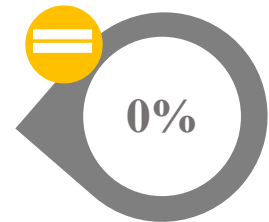
6%



Public Transit

2016

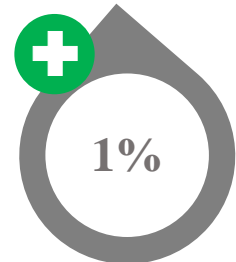
9%



Walk

2016

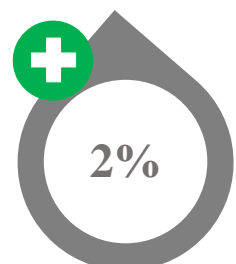
14%



Bicycle

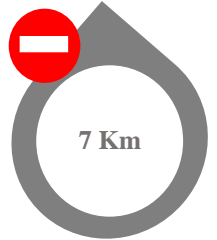
2016

5%

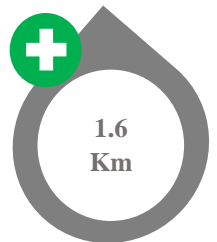


3 Average Distance Travelled Per Person for Non-Work Trips (Km)

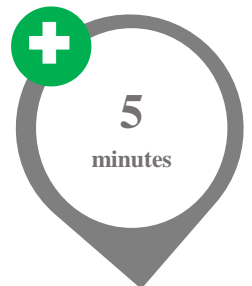
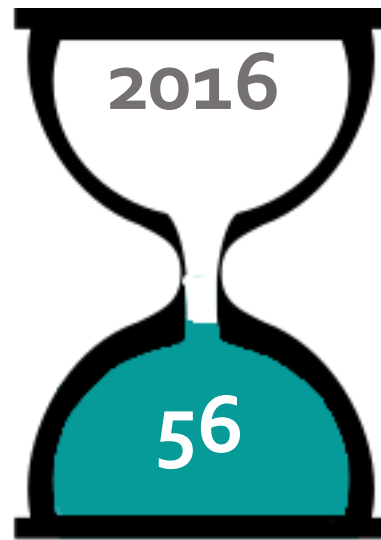
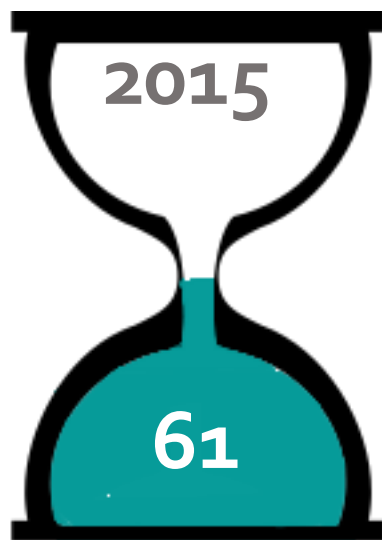
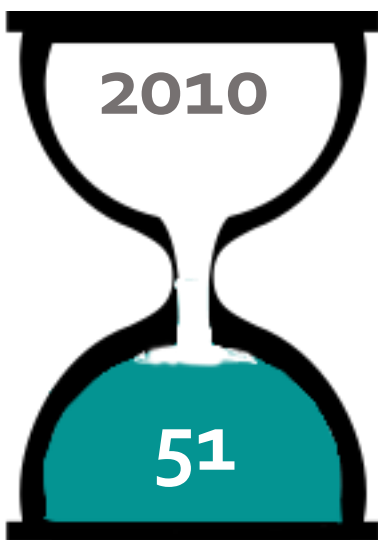
28 Km Vehicle Kilometers Traveled (VKT)



8.1 Km Traveled by Transit and Active Transportation (AT)



4 Average Daily Travel Time for Auto Drivers (minutes)

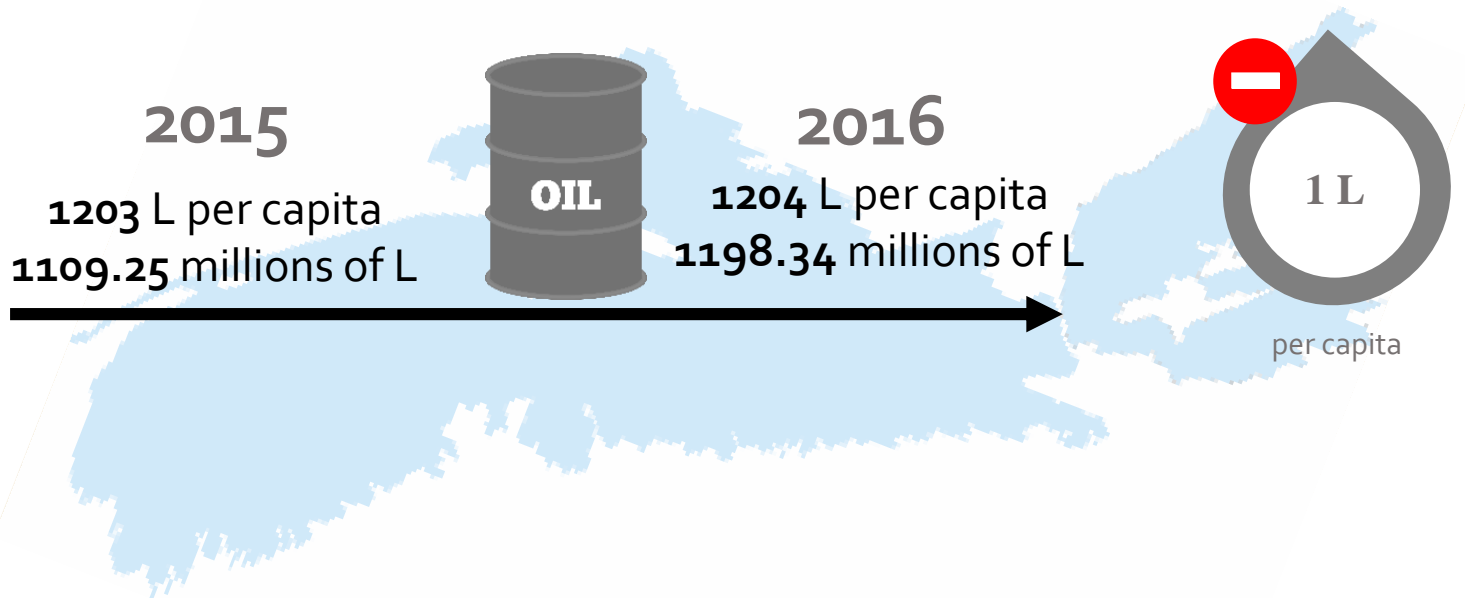


*Data source: NovaTRAC 2015 and 2016 (General Social Survey (GSS) 2010 data for comparison)

Energy Use and Emissions

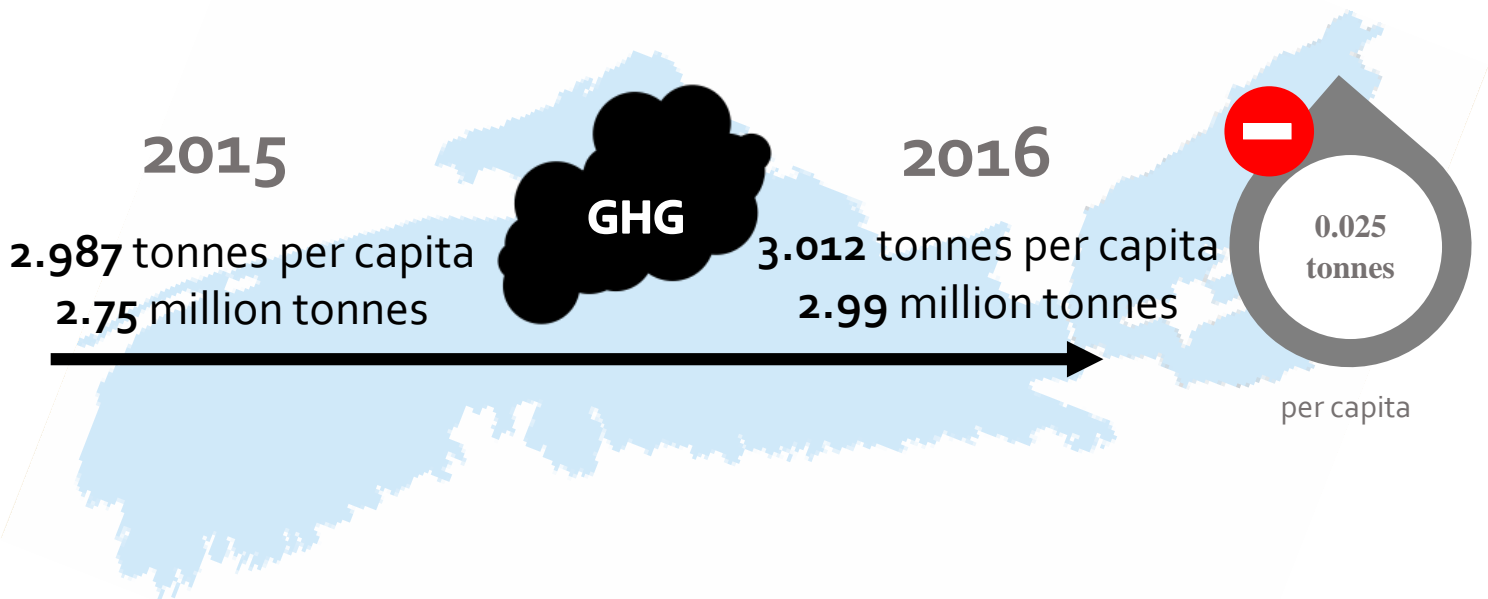
5

Fuel Consumption for Passenger Transport per Capita and Total Amount



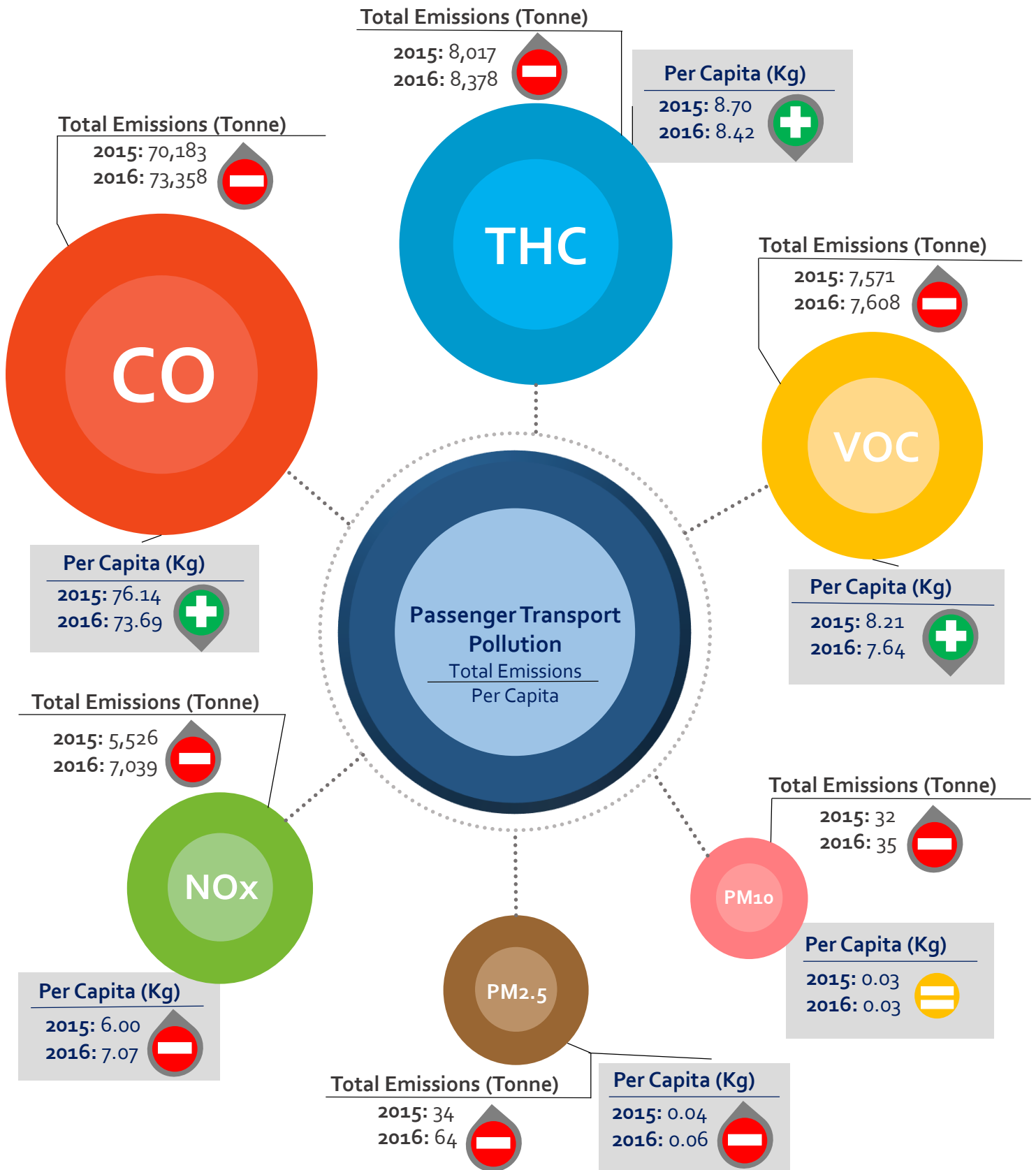
6

GHG Emissions for Passenger Transport per Capita and Total Amount



7

Amount of Criteria Pollutants from Passenger Transport



Significance

The Tracking Progress report characterizes the trends in travel choices and behaviour obtained from the Nova Scotia Travel Activity (NovaTRAC) 2015 and 2016 survey, and identifies estimates of energy use and emissions for the Province. The finer grain data provides increased confidence in the estimation results, presenting valuable insights for decision makers to consider when planning how to move forward towards a more sustainable transportation system for the Province.

Conclusion

Overall, Nova Scotians predominantly remain auto dependant for work and non-work trips. Fuel consumption and greenhouse gas (GHG) emissions increased slightly, as well as most criteria pollutants. However, there is a **positive trend** and an increase in people using active transportation modes (i.e. walk and bike) for trips. Further growth in the use of transit and active transportation (AT) would be achieved by investing transit and AT infrastructure, to allow communities across Nova Scotia offer diversified travel choices, and reduce fuel consumption and emissions.

Recommendations

The travel activity and emission estimates generated through this study provide the trends and newer baselines for key sustainability indicators for the Province of Nova Scotia. It is recommended that the NovaTRAC survey be conducted bi-annually starting in 2018. The survey will help with the continuation of tracking progress, and monitoring of sustainable transportation indicators. Additionally, the HRM transport model can be improved and used for policy scenario testing, including carbon pricing scenarios and identifying it's impact on travellers. Finally, we would need to develop a simulation-based emission model for better and consistent estimation of GHG emission, criteria pollutants and fuel consumption. Particularly, we are interested to expand the model by utilizing the Motor Vehicle Emission Simulator (MOVES) platform sponsored by the US EPA.

For additional information on the content of this summary, contact daltrac@dal.ca or check DalTRAC research website at <http://www.dal.ca/sites/daltrac.html>.