INTRODUCTION
In 2005-06, undergraduate enrolment in Maritime universities entered a decline after four successive years of growth (prior to this period, enrolment trends in the 1980s and early 1990s were characterized by continuous strong growth followed by a slow decline and plateau in the mid- to late 1990s). Though it has been widely known in this region that projected demographic changes could lead to decreased enrolment of students from the Maritimes in the region's universities, the effect of this demographic slide was not expected to have an impact until the 2009-10 academic year. In order to gain an understanding of the factors at play, the Commission’s stakeholders called for an analysis of this recent and unexpected trend.

We have cast a wide net in this analysis, attempting to gather any data, statistics and information which might shed light on the trends observed. To be useful to institutions entering the planning process for 2007-08, the findings had to be provided in a very timely manner. To do this, March 31st was the arbitrary cut-off date for acquiring data and statistics to be included in the analysis, and a brief format was chosen for this report.

The foundation for the analysis was based on the Commission’s PSIS (Postsecondary Student Information System) database. Among the other sources drawn upon were: detailed preliminary statistics (2006-07) submitted by Maritime universities at the request of the Commission (note: perhaps as a result of this short timeline, not every institution was able to provide all details requested); enrolment statistics from other universities across Canada; labour force statistics; and high school enrolment and forecast enrolment. While drawing on many sources comes with some attendant caution in the interpretation of results, we nevertheless believe that because of the strength of the trends uncovered, confidence can be placed in the findings and conclusions.

Key Findings

1. In 2004-05, Maritime university enrolment reached an all-time high: by 2006-07 undergraduate enrolment decreased 4.5% to 2002-03 levels.
2. The decline of younger students originally from the Maritimes began after 2003-04, but the overall enrolment decline was offset by the concomitant increase in enrolment of students from Ontario (“the double cohort”). Enrolment of the ≤19 years cohort from the Maritimes is now below 2000-01 levels.
3. Several important factors converge to explain the recent decline:
   - Tuition fees seem to influence students’ choice of institution. This appears to be an important factor explaining the increasing number of Maritimers studying at the Memorial University of Newfoundland (up +884% since 1999-2000).
   - Increasing demand (and corresponding enrolment-growth) for community college education in the region (enrolment up 21% in NS, and 5% in NB, since 2000, PEI – little change over the same period).
   - A strong economy: decreasing unemployment rates (drop of 1.2 percentage points since 2000), resulting in more university-age people entering the workforce (up 6%).
4. Highest out-migration from the region since 1981, and the highest net out-migration of the most mobile age group, the university-age population – for study and or work- since 1998 (net out-migration of provincial 18-24 population: 1.6% NS; 3.4% NB and 3.6% PE).
4. The anticipated demographic decline in the university-age population in the Maritimes will begin affecting university enrolment as early as the fall of 2009.

Conclusion
The universities are faced with very real challenges that extend beyond demography. A strong economy, here and elsewhere; increasing popularity of other education providers, and the cost of a university education have all contributed to the recent decline. The impact of these factors will likely be exacerbated by the anticipated decrease in the overall university-age population. Accounting solely for the demographic decline, undergraduate enrolment could decline by as much as 10% between 2008 and 2018.
UNIVERSITY ENROLMENT TRENDS

After four successive years of growth, undergraduate enrolment in Maritime universities has declined since 2004-05 (Fig. 1)

- Between 2000-01 and 2004-05 undergraduate university enrolment increased 14% in the Maritimes. A decrease in enrolment of 1% was observed between 2004-05 and 2005-06.
- Preliminary data show a 3% decline in undergraduate enrolment between 2005-06 and 2006-07.
- Other notable enrolment trends, 2000-01 to 2005-06:
  - The ratio of males (40%) to females (60%) has not changed in undergraduate enrolments.
  - The proportion of undergraduate students enrolled full-time (vs. part-time) has increased from 83% to 85%.
  - At the program level, undergraduate enrolment in computer sciences declined 25% between 2001-02 and 2005-06. Enrolment in Commerce and Administration declined 2% between 2004-05 and 2005-06.
  - Graduate student enrolment increased 23% (from 6,711 to 8,280 students).

The enrolment of younger students began to decline in 2004-05 (Fig. 2)

- The number of students ≤19 years increased 13% between 2000-01 and 2003-04.
- Enrolment of the ≤19 cohort originally from the Maritimes increased 4% during the same period, and in 2005-06 enrolment of this group was below 2000-01 levels.
- The double cohort of first year Ontario students in 2003-04 masked the decline in younger students from other origins.
- The impact of the double cohort was not felt equally by all universities. It was much greater in Nova Scotia universities, where Ontario students made up more than 17% of the ≤19 cohort in 2003-04. In New Brunswick, 6% of students from this group were from Ontario in 2003-04 and Prince Edward Island, 2%.

Some factors potentially contributing to the decline in the enrolment of younger students:

- Between 2000 and 2006, there was a 4.5 percentage point drop in the proportion of Nova Scotia high school graduates expected to attend university (Nova Scotia high school guidance counselor survey).
- In 2000, 58% of female high school graduates were expected to attend university, but in 2006 the percentage was back to 1992 levels (53%).
- Male high school graduates expected to attend university dropped 7 percentage points between 2000 and 2006 (from 46% to 39%), and 10 percentage points since 1992 (49%).
- Many high school graduates may choose to delay post-secondary education. At graduation, 69% of 2002 high school graduates in New Brunswick planned to attend a post-secondary education (PSE) institution directly after high school while 22% intended to work immediately after high school and attend a PSE institution later, while 9% did not plan to pursue any PSE in the future. Within two years of graduation 47% of the same high school graduates had attended university, 20% community college, and 8% some other post-secondary institution; 19% still had not attended a PSE institution but planned to do so in the future, and only 6% did not plan to attend (Survey of 2002 New Brunswick High School Graduates).
The proportion of students from outside the Maritimes has increased (Fig. 3)

- In 2005-06, 75% of undergraduate students enrolled in Maritime Universities were from the Maritime provinces, compared to 81% in 2000-01. During this period, Nova Scotia universities showed the largest decrease in the proportion of students from their home province (from 71% in 2000-01 to 61% in 2005-06). Students from New Brunswick studying in their home province decreased by less than 1% (from 73% to 72%) while Prince Edward Island had a one percent increase in students from their home province (from 78% to 79%).
- The two largest groups of undergraduate students from outside the Maritimes in 2005-06 were those from Ontario (10% of all students) and those from outside the country (8% of all students). These two groups also showed the greatest growth between 2000-01 and 2005-06.
- Enrolment of Ontario residents in Maritime universities increased 85% (+2,888 students) between 2000-01 and 2005-06, an increase largely the result of the double cohort in 2003. Students from Ontario were more likely to have enrolled in a Nova Scotia institution where they made up 8% of the undergraduate student population in 2000-01, and almost 14% in 2005-06.
- Enrolment of undergraduate students from outside Canada increased 98% (+2,674 students) between 2000-01 and 2005-06.
- Preliminary data for 2006-07 show that enrolment of undergraduate students from outside Canada declined 28% in New Brunswick over the last two years and 7% in Nova Scotia over the last year. In Prince Edward Island, however, the number of students from outside Canada increased every year since 2000-01. In 2005-06, this group made up 5% of the undergraduate population in Prince Edward Island, while they made up 9% of the Nova Scotia and 7% of the New Brunswick undergraduate student population.
- Canadian students from other provinces outside the Maritimes (excluding Ontario, and Newfoundland and Labrador), showed a 36% (+759 students) increase in undergraduate enrolment between 2000-01 and 2005-06.
- The number of undergraduate students from Newfoundland and Labrador enrolled in Maritime universities has dropped by almost half (-1,142 students). In 2000-01 they represented more than 4% of undergraduate students in Maritime universities, but now represent only 2%. This drop can partly be attributed to a demographic decline in the university-age population in Newfoundland and Labrador, as well as a tuition decrease and freeze at the Memorial University of Newfoundland.
The number of Maritimers leaving the region to study has increased, with Newfoundland showing the greatest increase (Table 1)

- Change in university enrolment of Maritimers in other provinces between 2002-03 and 2005-06:
  - The greatest change in undergraduate enrolment of Maritimers in other provinces was a 111% increase in enrolment in Newfoundland.
  - Ontario Universities continue to be the most popular among students leaving the region to study but the numbers have been relatively stable.
  - The number of students from the Maritimes studying in Quebec increased 11%. Half of this increase was due to an increase in the number of Nova Scotia residents studying in English language universities; and the other half was due to an increase in the number of New Brunswick Francophone residents enrolling in French language universities.

Tuition does seem to matter: evidence of increased competition within the region for Maritimers

- Average tuition fees in the Maritimes increased 41% between 2000-01 and 2006-07 at an average of 6% per year.
- In 2000-01, the difference between the universities with the lowest and highest tuition fees was $2,745; in 2006-07, this difference was $3,707.
- There is a strong and statistically significant correlation between tuition fees in 2005-06 and the change in enrolment of students from the Maritimes between 2000-01 and 2005-06. Universities with the lowest tuition showed the highest increase in enrolment of undergraduate students originally from the Maritimes, while universities with the highest tuition showed a drop in enrolment of Maritimers during this same period.
- There is no significant correlation between tuition fees and enrolment of undergraduate students from outside the region. There is also no correlation between other university fees (mandatory fees, and residence and meal plans) and undergraduate student enrolment.
- As noted earlier, between 2002-03 and 2005-06, the enrolment of Maritimers at the Memorial University of Newfoundland increased 111%, however, this increase was part of a longer-term trend: enrolment increased 884% from 103 students in 1999-2000, to 1,014 students in 2006-07 (Fig. 5). Students originally from Nova Scotia showed a more than ten-fold increase from 64 students in 1999-2000 to 725 students in 2006-07. Prior to 2000-01, full-time enrolment of Maritimers remained at slightly more than 100 students (data from 1997-98 to 1999-2000).
- This steady increase in enrolment of Maritimers coincides with a 23% decrease in tuition from 2000-01 to 2003-04 and a subsequent tuition freeze at the Memorial University of Newfoundland.

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Table 1 Enrolment of Maritimers in Canadian universities: 2002-03 to 2005-06

<table>
<thead>
<tr>
<th>Province of University</th>
<th>(# of universities in sample)</th>
<th># of students</th>
<th>Δ %</th>
<th># %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontario (20/20)</td>
<td>2020</td>
<td>1905</td>
<td>+14</td>
<td>+0.7</td>
</tr>
<tr>
<td>Quebec (6/9)*</td>
<td>1063</td>
<td>1081</td>
<td>+19</td>
<td>+11</td>
</tr>
<tr>
<td>Newfoundland (1/1)</td>
<td>396</td>
<td>468</td>
<td>+440</td>
<td>+111</td>
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<tr>
<td>Alberta (3/3)</td>
<td>215</td>
<td>239</td>
<td>+33</td>
<td>+15</td>
</tr>
<tr>
<td>Manitoba (1/3)*</td>
<td>86</td>
<td>100</td>
<td>+17</td>
<td>+20</td>
</tr>
<tr>
<td>Saskatchewan (1/3)</td>
<td>31</td>
<td>21</td>
<td>-18</td>
<td>-58</td>
</tr>
<tr>
<td>British Columbia (1/6)</td>
<td>74</td>
<td>58</td>
<td>-10</td>
<td>-14</td>
</tr>
<tr>
<td>Maritime Universities (16/16)</td>
<td>3886</td>
<td>3861</td>
<td>+607</td>
<td>+16</td>
</tr>
</tbody>
</table>

Source: data compiled from individual university sources (publicly funded universities only, does not include university colleges; available by March 31, 2007). Only full-time undergraduate students are included when the breakdown is possible. Based on statistics from 1999-2000 (Statistics Canada), universities and provinces with the largest enrolment of Maritimers have been sampled.

* Includes graduate students for some universities

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Figure 5 Undergraduate students from the Maritimes enrolled full-time at the Memorial University of Newfoundland (MUN) and tuition fees.
PARTICIPATION RATES

University participation rates in the Maritimes remained stable or decreased slightly over the last few years (Fig. 6)

Two definitions of participation rate are used here to account for the large influx of students from outside the region, and for students who leave their home province to study. The first definition is: All students (regardless of origin) enrolled full time in universities in each province ÷ the number of 18-24 year olds in each province. The second definition is: the number of residents of each province enrolled full-time in Canadian universities ÷ the number of 18-24 year olds in each province. The first definition measures general student activity in the province as a proportion of the university student-age population, while the second measures the propensity of students from a particular province to attend university.

- The participation rates of students at Nova Scotia and New Brunswick universities are the highest in the country. This can be attributed in part to the high enrolment of out-of-province students.
- The university participation rate of Maritime residents remained above the national average in 2005-06, but the gap has decreased. Since 1991 the university participation rate of Maritime residents has remained 4 to 5 percentage points above the national average. In 2005-06, however, the participation rate of Maritime residents decreased slightly to 27.3%, less than 2 percentage points above the national average of 25.6%.
- The participation rate of Nova Scotians in Canadian universities has declined 2 percentage points since 2002-03.
- The participation rate of Prince Edward Island residents in Canadian universities is now the highest in the Maritimes and has remained at about 30% over the last three years.
- The university participation rate in New Brunswick has continued to increase between 2005-06 and 2006-07; but this change can mainly be attributed to the Francophone population of New Brunswick:
  - The university participation rate of Francophones in New Brunswick remains below the Anglophone population of the Maritimes but the gap has been decreasing3.
  - The participation rate of Francophones at the Université de Moncton in New Brunswick has increased from 18.5% in 2000-01 to 22.5% in 2005-06, while the participation rate in English-language universities in New Brunswick has remained relatively stable since 2003 (from 31.7% to 31.3%).
  - The participation rate of Francophones from New Brunswick in Canadian French-language universities also increased 3.3 percentage points between 2001-02 and 2005-06. The participation rate of Anglophones from New Brunswick increased slightly (0.6 percentage point) over the same period.

Figure 6(a) University participation rates in Maritime universities. All students enrolled full time in universities from each province ÷ # of 18-24 year olds in each province.

Figure 6(b) University participation rates of Maritime residents at 45 of 61 Canadian Universities. Residents of each province enrolled full-time in Canadian universities ÷ # of 18-24 year olds in each province.

Source: MPHEC PSIS data for Maritime institutions (2000-01 to 2005-06); preliminary data (2006-07); data compiled from individual university sources outside Maritimes (see detailed information Table 1); Population data, Statistics Canada; Enrolment data for Canadian universities; Statistics Canada PSIS (2000-01 to 2004-05) and AUCC (2005-06 and 2006-07).
OTHER FACTORS

Enrolment in community colleges in the region has increased (Fig. 7)

- In Nova Scotia, enrolment in community colleges increased 26% between 2000-01 and 2006-07.
- Although enrolment in community colleges only increased 5% in New Brunswick between 2000-01 and 2005-06, applications increased 27% over the same period.
- In Nova Scotia 20% of 2006 high school graduates were expected to attend community colleges after high school. Between 2000 and 2006, there was a two percentage point increase in male and a one percentage point increase in female high school graduates expected to attend community college (Nova Scotia Guidance Counselor survey).
- In Nova Scotia community colleges male and female students choose different fields of study. Males are more likely to be enrolled in Trades and Technology Programs (91% male students) and females in Business (72% female students) and Health and Human Services (87% female students). These three programs have also shown the largest increase in enrolment since 2002-03: Trades and Technology programs have shown an 18% increase in enrolment (both males and females), while 21% and 22% more female students enrolled in Business, and Health and Human Services, respectively.
- The proportion of male students enrolled at Holland College in Prince Edward Island increased from 52% in 2000-01 to 56% in 2005-06.
- Historically, participation rates in community colleges in the Maritimes have been lower than in universities, but increased from 4% to 8% between 1993 and 1998 (Statistics Canada).
- Between 2001-02 and 2005-06 community college participation rates:
  - increased in Nova Scotia from 8.6% to 10.1%.
  - remained relatively stable in New Brunswick, increasing slightly from 7.4% to 7.6%.
  - decreased in Prince Edward from 12.6% to 11.5%.

[Participation rate = total enrolment ÷ 18 - 24 year old provincial cohort]

- By comparison, the community college participation rate in 2005-06 in Ontario was 11% and in Quebec the participation rate in CÉGEP technical programs was also at 11%.
- There are no data available for private colleges, but 8% of 2002 New Brunswick high school graduates attended some form of PSE institution other than public colleges or universities after high school, and in Nova Scotia 6% of 2006 high school graduates were expected to attend another PSE institution other than university or community college.

NOTE: Further statistics supporting this study are available on www.mphec.ca
Employment rates for community college graduates approach university rates (Fig. 8)

- Employment rates have increased for community college and university graduates since 2001. University graduates show higher employment rates (2 years after graduation) than community college graduates (1 year after graduation). However, this gap may actually be less, given the one year difference.
- Community college graduates were more likely to find employment related to their field of study than university graduates, however, 85% of 2003 university graduates with an applied or professional degree found employment related to their degree in 2005.

The university-age population choosing to join the workforce has increased

- Between 2000 and 2006:
  - The unemployment rate in the Maritimes for all age groups dropped 1.2 percentage points from 9.7% to 8.5%.
  - The number of 15-24 year olds declined 1%.
  - The number of 15-24 year olds joining the labour force and finding full-time employment both increased 6%.
  - Nova Scotia high school graduates expected to join the workforce increased 4 percentage points from 12% to 16%.
- In Nova Scotia, there was a strong correlation between the unemployment rate and the proportion of males expected to join the workforce after high school. The percentage of male high school graduates expected to join the workforce doubled between 1992 and 2006 (Nova Scotia Guidance Counselor survey) (Fig. 9).
The number of Maritimers leaving the region has increased

- 1.8% (>32,000) of Maritimers left the region between July 2005 and June 2006. This was the highest out-migration rate since 1980-1981 when 2.2% of Maritimers left the region.
- The increase in out-migration over the last two years was mainly due to Maritimers moving to Alberta.
- The 18-24 year old group is the most mobile. There has been a net loss of 18-24 year olds every year in the Maritime provinces over the last 17 years.
- In 2005-06 the net out-migration rate of 18-24 year olds from Nova Scotia (1.6%) was the highest since 1997-98 (which was approximately the same at 1.7%). [Net out-migration rate = (out-migrants – in migrants) ÷ population].
- In 2005-06, Prince Edward Island and New Brunswick showed the highest net out-migration of 18-24 year olds in over 17 years (3.4% and 2.6% respectively).

LOOKING AHEAD...
The Maritime 18-24 year old population is expected to continue declining (Fig. 10)

- Between 1990 and 2004:
  - The population of 18-24 year olds in the Maritimes declined by 11%.
  - Full-time university enrolment in Maritime universities increased 26%.
  - Participation rates increased from 24% to 34% [The number of full-time graduate and undergraduate university students ÷ by the provincial 18-24 cohort].
- We are currently experiencing an “echo boom” in the 18-24 year old cohort; The children of the baby boomers are of university-age.
- In the Maritimes, the 18-24 year old population is expected to increase slightly in 2008, and then decline by 14% over the following 10 years.
- The Canadian population of 18-24 year olds is expected to continue increasing until 2013 (source: Statistics Canada).
- Of the 63,796 undergraduate students enrolled in Maritime universities in 2005-06, 75% (48,007) were originally from the Maritimes and the remaining 25% were from outside the region. Accounting solely for the anticipated demographic decline in the 18-24 cohort of Maritimers, and assuming that the number of students from outside of the Maritimes remain at current levels, then undergraduate enrolment could decline by as much as 10% between 2008 and 2018.

**The number of high school graduates is expected to decline after 2008 (Fig. 11)**

- While the number of high school graduates is set to peak in 2007-08 for Nova Scotia and Prince Edward Island, New Brunswick has already reached its peak, in 2005-06. This suggests that NB university enrolment has already been affected by the demographic shift.

**ENDNOTES**

1. Eight out of 10 institutions; geographic origin of students was not available for two Nova Scotia institutions in 2006-07.

2. Cape Breton University delivers a Bachelor of Education conferred by the Memorial University of Newfoundland (enrolment is counted under MUN). Enrolment was approximately 40 students per year beginning in May 2003.

3. The Anglophone/Francophone breakdown within the 18-24 cohort was estimated using the average proportion of Francophones enrolled in grade 12 over the range of years this cohort would have graduated from high school.

**LIST OF DATA SOURCES**

- **Enrolment at Maritime Universities:**
  - MPHEC Postsecondary Student Information System (PSIS) final audited data (2000-01 to 2005-06)
  - MPHEC University Student Information System (USIS) data (1990-91 to 1999-2000)
  - Preliminary submissions by individual universities (2006-07 enrolment statistics)

- **Enrolment and projected enrolment of high school graduates:**
  - Nova Scotia Department of Education
  - New Brunswick Department of Education
  - Prince Edward Island Department of Education

- **Intended destination of high school graduates:**
  - Survey of 2002 New Brunswick High School Graduates, The New Brunswick Department of Training and Employment

- **Demographic and Labour force statistics:**
  - Statistics Canada, Labour Force Survey. Interprovincial migration CANSIM Table 051-0012
  - Canadian Population. CANSIM table 051-0001
  - Population Projections. CANSIM table 052-0004

- **Enrolment in Canadian Universities outside the Maritimes:**
  - Development and The Department of Education
  - Prince Edward Island, Expectations of High School Graduates 2003. Department of Education Policy, Planning and Evaluation Division

- **University of Ottawa, Institutional Planning**

- **University of Sherbrooke, Bureaucrat:**

- **McGill University Enrolment Report, Fall 2003 to Fall 2006**

- **Concordia University, Institutional Planning**

- **Université de Montréal, Régistralariat, statistiques officielles.**

- **Université du Québec, Base de données PRISME, Vice-présidence à l’enseignement et à la recherche**

- **Ontario Universities, Ontario Ministry of training, colleges and Universities, University Student Information System – University Affairs Report (USIS-UAR)**

- **University of Ottawa, Institutional Research and Planning**

**Figure 11 High school graduates in the Maritimes provinces and projections.**

Source: Nova Scotia, New Brunswick and Prince Edward Island Departments of Education. The projected number of high school graduates are based on current enrolment and graduation rates. Graduation rates are NB, 87%; NS, 85%; and PE, 84%.
SURVEYING THE ENROLMENT LANDSCAPE

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SURVEYING THE ENROLMENT LANDSCAPE

NOTES: