

## Gone fishing: A profile of recreational fishing in Canada

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With the longest coastline in the world and about a quarter of the planet's freshwater resources, Canada is well-known for its fisheries—including its recreational fisheries. Fishing or angling has historically been a popular leisure activity for both Canadians and visitors alike. The important economic contributions of recreational fishing are felt in all parts of Canada, especially in many remote areas. However, this activity can have environmental implications, particularly on fish populations. In addition to the effect of recreational fishing, fish numbers are also influenced by a number of other factors including commercial fishing, water quality, fish habitat, invasive species and fish stocking. Recreational fishing activities, which can include fish stocking, can have a positive impact on our environment. Similarly, cleaner waterways and ecosystems, which are promoted by this industry, benefit not only angling activities, but also the environment in general.

This article provides a portrait of recreational fishing in Canada. Overall, the declining number of anglers has led to reduced fish harvests, particularly in Ontario, Quebec and British Columbia where the majority of Canada's recreational anglers live. From an economic point of view, each angler is spending about the same amount of money as ten years ago. However, the reduction in the total number of anglers has lowered total expenditures on recreational fishing.

### Recreational anglers in Canada

In 2005, more than 3.2 million adults bought licences and fished for recreation in Canada. Trends show that these numbers have decreased at an average annual rate of 2% during the past ten years.<sup>1</sup>

Approximately eight out of every ten, or 2.5 million, anglers fished within their home province or territory. The remaining population of recreational anglers consisted of about 628,000

1. Fisheries and Oceans Canada, 2007, *2005 Survey of Recreational Fishing in Canada*, [www.dfo-mpo.gc.ca/communic/statistics/recreational/canada/2005/index\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/recreational/canada/2005/index_e.htm) (accessed December 19, 2007).

### What you should know about this study

All recreational fishing data in this article came from the Survey of Recreational Fishing in Canada conducted by the Department of Fisheries and Oceans. Although the survey has been in existence since 1975, only the 1995, 2000 and 2005 versions are comparable due to methodological improvements. The survey's target population covered all individuals identified in the 2005 provincial and territorial recreational fishing licence databases. In 2005, the questionnaires were mailed out to over 80,000 households within Canada and in other countries. This study examines only the recreational fishing activities of active adult anglers covered in the survey. The adult angler population does not include individuals less than 16 years of age (18 years of age in Newfoundland and Labrador and Quebec).

Recreational fishing refers to non-commercial fishing; recreational angling and sport fishing are covered in the definition used by the survey. Note that ceremonial fishing and subsistence fishing are not covered by the survey and are therefore not included in any of the estimates presented in this report. Illegal fishing activities are also not included in these data.

Due to separate licencing systems in British Columbia, tidal and freshwater fishing are presented separately. This presents a challenge for analyzing British Columbia's anglers. A given resident could hold both a tidal and freshwater licence, thus combining categories is not possible.

For more information on the Survey of Recreational Fishing in Canada please visit the following website: [www.dfo-mpo.gc.ca/communic/statistics/recreational/index\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/recreational/index_e.htm).

visitors to Canada and also just over 150,000 Canadians who fished outside their home province or territory. This article focuses only upon those active anglers who fished within their own province, known as "resident anglers."

### Where are these anglers?

Approximately three quarters of active resident anglers live in Ontario, Quebec or British Columbia (Table 1). When the proportion of the adult population engaged in recreational fishing is analyzed by province, a varied portrait emerges.

Nationally, about one in every ten Canadian adults were active anglers. In Newfoundland and Labrador, almost one third of the adult population were active anglers (Chart 1). The other provinces where the participation rates were higher than the national rate were Yukon, Saskatchewan, Manitoba and Quebec. In Nunavut, only 4% of the

**Table 1**  
**Number and average age of active resident anglers, by gender and jurisdiction, 2005**

	Total	Males	Females	Males	Females	Males	Females
	number of anglers			percentage		average age	
Newfoundland and Labrador	131,578	85,668	45,910	65	35	49	47
Prince Edward Island	6,929	6,520	409	94	6	49	43
Nova Scotia	43,775	38,919	4,856	89	11	50	49
New Brunswick	43,382	37,197	6,186	86	14	49	49
Quebec	656,543	445,603	210,940	68	32	50	46
Ontario	764,374	562,827	201,547	74	26	46	43
Manitoba	121,788	95,489	26,299	78	22	48	47
Saskatchewan	119,824	86,162	33,662	72	28	47	45
Alberta	179,461	142,624	36,837	79	21	44	42
British Columbia - Freshwater	211,403	171,587	39,816	81	19	51	49
British Columbia - Tidal waters	169,863	130,106	39,757	77	23	45	37
Yukon	5,048	3,596	1,452	71	29	45	44
Northwest Territories	2,138	1,639	499	77	23	43	37
Nunavut	769	562	207	73	27	43	38
<b>Canada</b>	<b>2,456,876</b>	<b>1,808,499</b>	<b>648,377</b>	<b>74</b>	<b>26</b>	<b>48</b>	<b>44</b>

**Note:**

Figures may not add up to total due to rounding.

**Sources:**

Fisheries and Oceans Canada, 2005 Survey of Recreational Fishing in Canada.  
Statistics Canada, Environment Accounts and Statistics Division.

adult population participated in recreational fishing.

**Recreational fishing is losing popularity**

Between 1995 and 2005, the number of resident anglers in Canada dropped by one quarter—meaning there were over 825 thousand fewer anglers (Chart 2).

The largest drops in angler numbers were found in Quebec (-370,200) and Ontario (-275,207), comprising about three quarters of the total loss in anglers. However, resident angler populations actually increased in three parts of the country: Newfoundland and Labrador, Manitoba and Nunavut. Between 1995 and 2005, the number of recreational anglers who called Newfoundland and Labrador home increased by 7%.

**Who are these anglers?**

Of the 2.5 million active resident anglers in Canada in 2005, almost three quarters were male (Table 1). These results coincide with public perception that recreational fishing is a predominantly male activity, and comparable results have also been found in surveys in the

United States and Australia. Research has shown that for women, commitments to children and family and perceptions of traditional gender roles have a negative influence on their likelihood to fish. Other factors include issues related to the lack of time, skill and other cultural influences.<sup>2</sup>

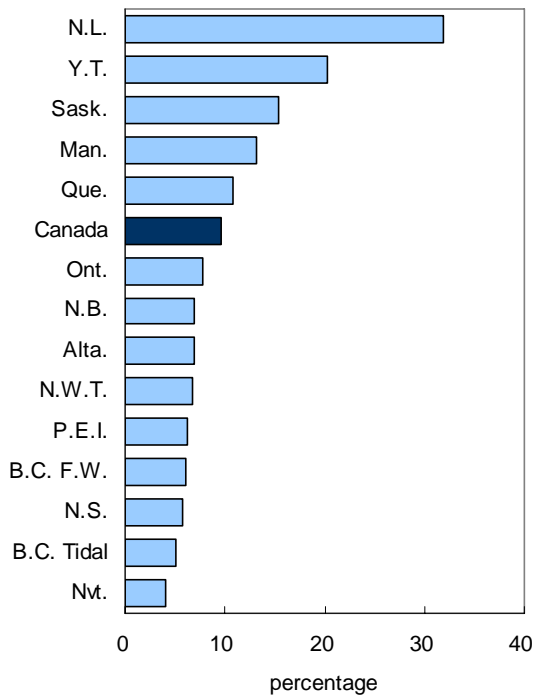
There were some provincial and territorial differences related to gender, but in all cases female anglers were a minority. In Newfoundland and Labrador and Quebec, about one third of anglers were female. Meanwhile in Prince Edward Island, only 6% of anglers were female.

**The angler population is aging**

Typically, anglers tended to be baby boomers. Male anglers were typically older than female anglers. Nationally, the average male angler was

2. Laura E. Anderson, David K. Loomis and Ronald J. Salz, 2004, "Constraints to recreational fishing: Concepts and questions to understand underrepresented angling groups," *Proceedings of the 2004 Northeastern Recreational Research Symposium*, GTR-NE-326, [www.fs.fed.us/ne/newtown\\_square/publications/technical\\_reports/pdfs/2005/326papers/anderson326.pdf](http://www.fs.fed.us/ne/newtown_square/publications/technical_reports/pdfs/2005/326papers/anderson326.pdf) (accessed February 6, 2008).

**Chart 1**  
Active resident anglers as a proportion of adult population, 2005



**Notes:**

B.C. F.W. represents British Columbia's freshwater anglers. Adult anglers are those 16 years of age and older (18 years of age in Newfoundland and Labrador and Quebec). Corresponding criteria were used to determine the adult population.

**Sources:**

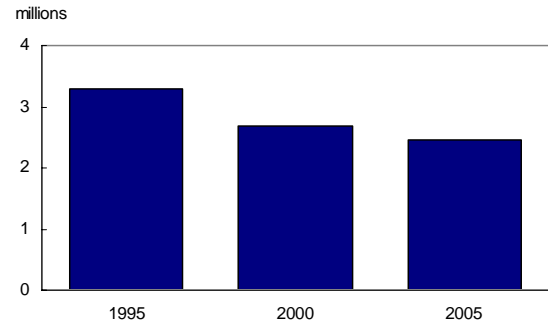
Statistics Canada, CANSIM Table 051-0001.  
Fisheries and Oceans Canada, 2005 Survey of Recreational Fishing in Canada.  
Statistics Canada, Environment Accounts and Statistics Division.

48 years old, whereas female anglers were on average four years younger (Table 1).

The Atlantic Provinces tended to have the oldest anglers, while the Northwest Territories and Nunavut had the youngest anglers. These trends correspond with overall population trends; the average age of the entire population is about 40 years in each of the Maritime Provinces, about 30 years of age in the Northwest Territories and only 23 years in Nunavut.<sup>3</sup>

3. Statistics Canada, CANSIM Table 051-0001 Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual, CANSIM (database), [http://cansim2.statcan.ca/cgi-](http://cansim2.statcan.ca/cgi-win/cnsmcqi.exe?Lang=E&CANSIMFile=CII\CII_1_E.htm&RootDir=CII/)

**Chart 2**  
Number of active resident anglers, 1995, 2000 and 2005, Canada



**Sources:**

Fisheries and Oceans Canada, 2005 Survey of Recreational Fishing in Canada.  
Statistics Canada, Environment Accounts and Statistics Division.

Similar to the Canadian population as a whole, the angler population has aged over the past ten years. In 2005, the average age of male anglers was 48, six years older than in 1995; female anglers were on average 44 years of age in 2005, four years older than in 1995.

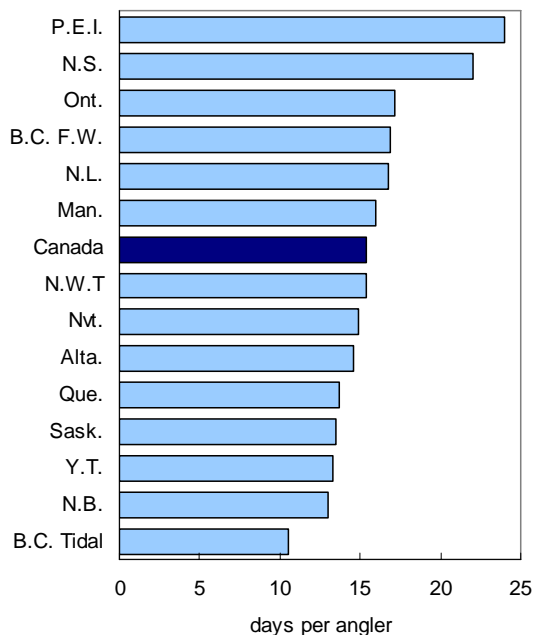
**Total days fished in Canada declines, but days fished per angler remains steady**

Given its direct relationship with the number of active anglers, the total number of days spent fishing declined over the past 10 years. In 2005, resident anglers fished a total of 37.7 million days in Canada, less than the 48.8 million days fished ten years earlier. The number of days fished per angler stayed the same, at about fifteen days per angler. Thus a smaller number of anglers appear to be fishing at the same level of activity.

Canadian anglers spent slightly over two weeks fishing in 2005 (Chart 3). On average, Prince Edward Islanders and Nova Scotians spent the greatest number of days fishing—they fished in total more than three weeks. Anglers in New Brunswick, Yukon, Saskatchewan and Quebec spent the least amount of time fishing per year.

[win/cnsmcqi.exe?Lang=E&CANSIMFile=CII\CII\\_1\\_E.htm&RootDir=CII/](http://win/cnsmcqi.exe?Lang=E&CANSIMFile=CII\CII_1_E.htm&RootDir=CII/) (accessed May 23, 2008).

**Chart 3**  
**Average number of days fished by resident anglers, 2005**



**Note:**

B.C. F.W. represents British Columbia's freshwater anglers.

**Sources:**

Fisheries and Oceans Canada, 2005 Survey of Recreational Fishing.

Statistics Canada, Environment Accounts and Statistics Division.

### How much did they spend?

In terms of direct expenditures, resident anglers spent over \$1.6 billion on recreational fishing in 2005 (Table 2). Three quarters of these expenditures were spent on food, lodging and transportation costs. Less than 10% of the direct expenditures were for actual fishing supplies.

Of the \$1.6 billion spent by resident anglers in Canada, almost 60% were spent in Ontario and Quebec. The large number of anglers in these two provinces explains their dominance in total expenditures. The relatively high expenditure per angler in these provinces is another contributing factor.

When looking at expenditures per angler by province, tidal water anglers from British Columbia led the country with over \$1,100 each in direct expenditures. This was much higher than the national average of \$650 per angler. In 2005, each resident angler in the Northwest Territories, Ontario, British Columbia (freshwater), and Alberta typically spent over the national average on recreational fishing.

Although Prince Edward Island's anglers were the most successful in terms of fish caught per angler, they spent the least amount of money. Anglers in Prince Edward Island, Nunavut and Newfoundland and Labrador spent less than half of the national average expenditure or one third of that of the tidal anglers in British Columbia.

### Declining total expenditures, but expenditures per angler remains stable

Total direct expenditures for recreational fishing in Canada declined from \$1.8 billion in 1995 to \$1.6 billion in 2005. Expenditures per angler increased from \$533 to \$652 per angler during the same time frame. However, when adjusted for inflation, the average expenditure remained roughly the same at \$513 per angler. Thus the drop in expenditures is a result of the decline in angler numbers; anglers are still spending at the same levels over time.

### Total catch down, fish caught per angler edges up

Although the number of fish caught per angler increased to 64 fish in 2005 from 60 in 1995, in just ten years, the total number of fish caught decreased by 20%. The total harvest dropped from 196 million in 1995 to 156 million in 2005 (Chart 4).

The largest drop occurred in Quebec, where 17 million fewer fish were caught in 2005 than in 1995. In Ontario, 9.7 million fewer fish were caught during this time frame. British Columbia's tidal waters catch also experienced a decline, with over 5 million fewer fish caught. These declines can be attributed to the drop in the number of anglers.

**Table 2**  
**Direct recreational fishing expenditures made by resident anglers, 2005**

	Package deals	Food and lodging	Transportation costs	Fishing services	Fishing supplies	Other	Total	Expenditure per angler
	thousand dollars							dollars
Newfoundland and Labrador	1,176	15,936	19,916	981	4,681	194	42,885	326
Prince Edward Island	8	368	934	227	380	26	1,944	281
Nova Scotia	60	6,459	9,647	1,162	2,826	167	20,321	464
New Brunswick	1,287	4,739	6,869	1,447	1,996	368	16,708	385
Quebec	47,622	118,551	142,147	33,249	35,710	1,614	378,894	577
Ontario	22,044	187,648	237,574	42,255	50,013	1,137	540,671	707
Manitoba	2,069	20,121	32,961	2,883	5,864	192	64,090	526
Saskatchewan	3,552	25,275	32,379	5,534	5,066	120	71,926	600
Alberta	3,349	46,750	54,408	7,578	12,158	339	124,582	694
British Columbia - Freshwater	3,672	51,830	63,689	9,412	14,669	3,827	147,100	696
British Columbia - Tidal waters	40,149	36,547	91,315	7,693	11,237	163	187,105	1,102
Yukon	0	938	1,608	124	254	5	2,929	580
Northwest Territories	162	379	973	34	147	16	1,710	800
Nunavut	2	94	98	2	46	1	244	317
<b>Canada</b>	<b>125,152</b>	<b>515,638</b>	<b>694,519</b>	<b>112,582</b>	<b>145,048</b>	<b>8,169</b>	<b>1,601,108</b>	<b>652</b>

**Sources:**

Fisheries and Oceans Canada, 2005 Survey of Recreational Fishing.  
Statistics Canada, Environment Accounts and Statistics Division.

**Most fish caught in Ontario, but Prince Edward Islanders were the most successful individual anglers**

Three quarters of the 156 million fish caught in 2005 were caught by resident anglers in the provinces of Ontario, Quebec and Alberta (Table 3). Over 40% of the total number of fish caught, or 65 million, were caught in Ontario alone.

The lowest numbers of fish were caught in the Northwest Territories and Nunavut. These trends were influenced by the relatively large number of anglers in Ontario and Quebec compared to the lower angler numbers in Nunavut and the Northwest Territories (see Table 1).

The catch per angler reflects the success of each angler and is not influenced by the angler population. On average, each resident angler caught 64 fish in 2005 (Table 3).

Anglers in Prince Edward Island were the most successful, with an average of 90 fish caught per angler. Other provinces with anglers who caught more fish than the national average were Alberta, Manitoba, Ontario and Nova Scotia.

The anglers in B.C.'s tidal waters caught just 14 fish each on average. Anglers in the three territories also did not fare so well; anglers in Nunavut caught 18 fish each in 2005.

**What did they catch?**

One quarter of fish caught by resident anglers in 2005 were trout. Other popular species were walleye (17%), perch (17%), bass (13%), northern pike (8%) and salmon (3%). The remaining 17% comprised other less common fish such as grayling, char and whitefish.

Trout were also more likely to be retained than other types of fish. Almost 60% of trout were kept, whereas only 14% of bass were retained by resident anglers in 2005.

**Table 3**  
**Fish caught and kept by resident anglers, 2005**

	Fish caught		Fish kept		Fish kept as a share of the total catch
	thousand	average per angler	thousand	average per angler	percent
Newfoundland and Labrador	8,251	63	5,984	45	73
Prince Edward Island	621	90	367	53	59
Nova Scotia	3,835	88	1,531	35	40
New Brunswick	2,302	53	877	20	38
Quebec	40,270	61	27,092	41	67
Ontario	65,094	85	16,069	21	25
Manitoba	8,705	71	2,278	19	26
Saskatchewan	5,827	49	2,025	17	35
Alberta	11,991	67	1,629	9	14
British Columbia - Freshwater	6,809	32	1,913	9	28
British Columbia - Tidal waters	2,369	14	980	6	41
Yukon	104	21	32	6	31
Northwest Territories.	90	42	25	12	28
Nunavut	14	18	6	8	46
<b>Canada</b>	<b>156,281</b>	<b>64</b>	<b>60,811</b>	<b>25</b>	<b>39</b>

**Sources:**

Fisheries and Oceans Canada, 2005 Survey of Recreational Fishing.  
 Statistics Canada, Environment Accounts and Statistics Division.

### Catch-and-release fishing becoming more popular

The amount of fish being kept has declined, which likely indicates that catch-and-release fishing has increased. In 1995, about half the fish caught by resident anglers were kept, whereas by 2005, only about 40% were kept (Chart 4). Possible reasons for the increased use of this practice include anglers viewing it as a conservation technique, legal requirements in some jurisdictions to catch-and-release and lastly because some fish are not fit for human consumption because of mercury or other sources of contamination.<sup>4</sup>

There was some variation among the provinces in catch-and-release practices. For instance, in Newfoundland and Labrador and in Prince Edward Island, the percentage of fish kept actually increased over the ten year period. The largest

percentage point decline occurred in British Columbia's tidal waters where the proportion of fish kept dropped from 71% in 1995 to 41% in 2005. Declines in the proportion of fish kept over the ten year period were larger than the national average in Alberta, Nova Scotia and Ontario.

### Newfoundlanders keep the most

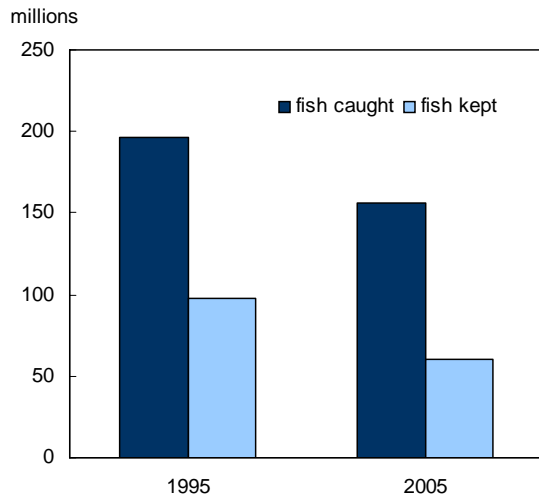
In 2005, resident anglers in Newfoundland retained the highest share of their catch at 73%, about 45 fish per angler (Table 3). With the exception of Ontario, anglers from the East were more likely to keep their fish than those in the West. In Alberta, only 14% of the total catch was kept, about 9 fish per angler.

### Recreational fishing effects and is affected by the environment

In many parts of the country, anglers are encouraged or often required by law to release fish that they have caught. For instance, an angler may have reached their allowable catch for a certain species on a given day and must return all further fish of that species caught on that day. Keeping any endangered or threatened fish species listed

4. S.J. Casselman, 2005, *Catch-and-Release Angling: A Review with Guidelines for Proper Fish Handling Practices*, Fish & Wildlife Branch, Ontario Ministry of Natural Resources, Peterborough, Ontario, [www.mnr.gov.on.ca/en/Business/LetsFish/2ColumnSubPage/STEL02\\_198018.html](http://www.mnr.gov.on.ca/en/Business/LetsFish/2ColumnSubPage/STEL02_198018.html) (accessed May 26, 2008).

**Chart 4**  
**Comparison of fish caught and kept,**  
**Canadian resident anglers, 1995 and 2005**



**Sources:**

Fisheries and Oceans Canada, 2005 Survey of Recreational Fishing in Canada.  
 Statistics Canada, Environment Accounts and Statistics Division.

under the *Species at Risk Act* is illegal and these fish must always be released if caught, due to their limited populations. For instance in Ontario, it is illegal to fish for or possess American eel, cutlip minnow and redbreast dace.<sup>5</sup>

In addition to catch-and-release programs, “put-and-take” or “put, grow and take” programs also minimize the influence of recreational fishing on natural fish stocks. In such a program, fish are put into a water body and allowed to grow in order to be removed by anglers. Many provinces stock lakes and rivers for recreational fishing purposes, in addition to stocking them to re-establish populations where they have deteriorated or even collapsed. In Alberta, for instance, over 50 million fish were placed in rivers and lakes as part of the province’s stocking program in 2007.<sup>6</sup> The stocking of lakes and streams is not new; fish



stocking has occurred in Ontario and British Columbia since the late 1800s.

In addition to fish stocking activities, government agencies and non-government agencies have also established programs to improve habitat including enhancing spawning beds, stabilizing banks, controlling shoreline erosion, clearing obstructions and building underwater or in-stream structures.<sup>7</sup> Programs and policies geared to improving water quality such as reducing toxins and phosphorus, implemented by various levels of government, can indirectly help fish stocks by improving water quality.

## Conclusion

The pressure of recreational fishing on fish populations appears to be decreasing. The downward trend in angler numbers, increasing age of anglers, decreased harvests and increased participation in catch-and-release fishing help to reduce the overall impact of recreational fishing on Canadian fish populations.

5. Fish and Wildlife Branch, 2007, *Fishing Regulations Summary, 2008-2009*, Ontario Ministry of Natural Resources, [www.mnr.gov.on.ca/en/Business/LetsFish/Publication/STEL02\\_163615.html](http://www.mnr.gov.on.ca/en/Business/LetsFish/Publication/STEL02_163615.html) (accessed May 23, 2008).

6. Sustainable Resource Development, Government of Alberta, 2007, *Stocking Report*, [www.mywildalberta.com/Home/Fishing/StockingReports.aspx](http://www.mywildalberta.com/Home/Fishing/StockingReports.aspx) (accessed May 23, 2008).

7. LandOwner Resource Centre, 1999, “Improving fish habitat,” *Extension Notes*, [www.lronline.com/Extension\\_Notes\\_English/pdf/fsh\\_hab.pdf](http://www.lronline.com/Extension_Notes_English/pdf/fsh_hab.pdf) (accessed February 6, 2008).