



Environment
Canada

Environnement
Canada



The 2011 Statistics on the International Movements of Hazardous Waste and Hazardous Recyclable Material

Waste Reduction and Management Division
Environment Canada

August 2012

Canada

Cat. No.: En11-7/2011E-PDF
ISSN 1927-2359

Information contained in this publication or product may be reproduced, in part or in whole, and by any means, for personal or public non-commercial purposes, without charge or further permission, unless otherwise specified.

You are asked to:

- Exercise due diligence in ensuring the accuracy of the materials reproduced;
- Indicate both the complete title of the materials reproduced, as well as the author organization; and
- Indicate that the reproduction is a copy of an official work that is published by the Government of Canada and that the reproduction has not been produced in affiliation with or with the endorsement of the Government of Canada.

Commercial reproduction and distribution is prohibited except with written permission from the Government of Canada's copyright administrator, Public Works and Government Services of Canada (PWGSC). For more information, please contact PWGSC at 613-996-6886 or at droitdauteur.copyright@tpsgc-pwgsc.gc.ca.

© Her Majesty the Queen in Right of Canada, represented by the Minister of the Environment, 2012

Aussi disponible en français

TABLE OF CONTENTS

GENERAL INFORMATION.....	1
THE 2011 STATISTICS ON THE INTERNATIONAL MOVEMENTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL.....	2
1. IMPORTS	3
2. EXPORTS.....	7
3. TRANSITS.....	11

LIST OF FIGURES

FIGURE 1: EXPORTS, IMPORTS AND TRANSITS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL 2002–2011.....	2
FIGURE 2: TYPE OF OPERATION FOR 2011 CANADIAN IMPORTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL	3
FIGURE 3: 2011 CANADIAN IMPORTS OF HAZARDOUS WASTE BY DISPOSAL OPERATION.....	4
FIGURE 4: 2011 CANADIAN IMPORTS OF HAZARDOUS RECYCLABLE MATERIAL BY RECYCLING OPERATION	5
FIGURE 5: COMPARISON OF 2010–2011 CANADIAN IMPORTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL BY PROVINCE.....	6
FIGURE 6: TYPE OF OPERATION FOR 2011 CANADIAN EXPORTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL	7
FIGURE 7: 2011 CANADIAN EXPORTS OF HAZARDOUS WASTE BY DISPOSAL OPERATION	8
FIGURE 8: 2011 CANADIAN EXPORTS OF HAZARDOUS RECYCLABLE MATERIAL BY RECYCLING OPERATION.....	9
FIGURE 9: COMPARISON OF 2010–2011 CANADIAN EXPORTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL BY PROVINCE.....	10
FIGURE 10: 2011 TRANSITS OF HAZARDOUS RECYCLABLE MATERIAL BY RECYCLING OPERATION	11

General Information

In Canada, the management of hazardous waste and hazardous recyclable material is a shared responsibility between all levels of government. The Government of Canada is responsible for regulating the international movements of hazardous waste and hazardous recyclable material.

International agreements play a key role in responding to environmental issues in Canada and abroad. Canada is party to three international agreements on the transboundary movements of hazardous waste, which are the United Nations Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Organisation for Economic Co-operation and Development (OECD) Decision of Council on the Control of Transfrontier Movements of Wastes Destined for Recovery Operations, and the Canada–US Agreement Concerning the Transboundary Movement of Hazardous Waste.

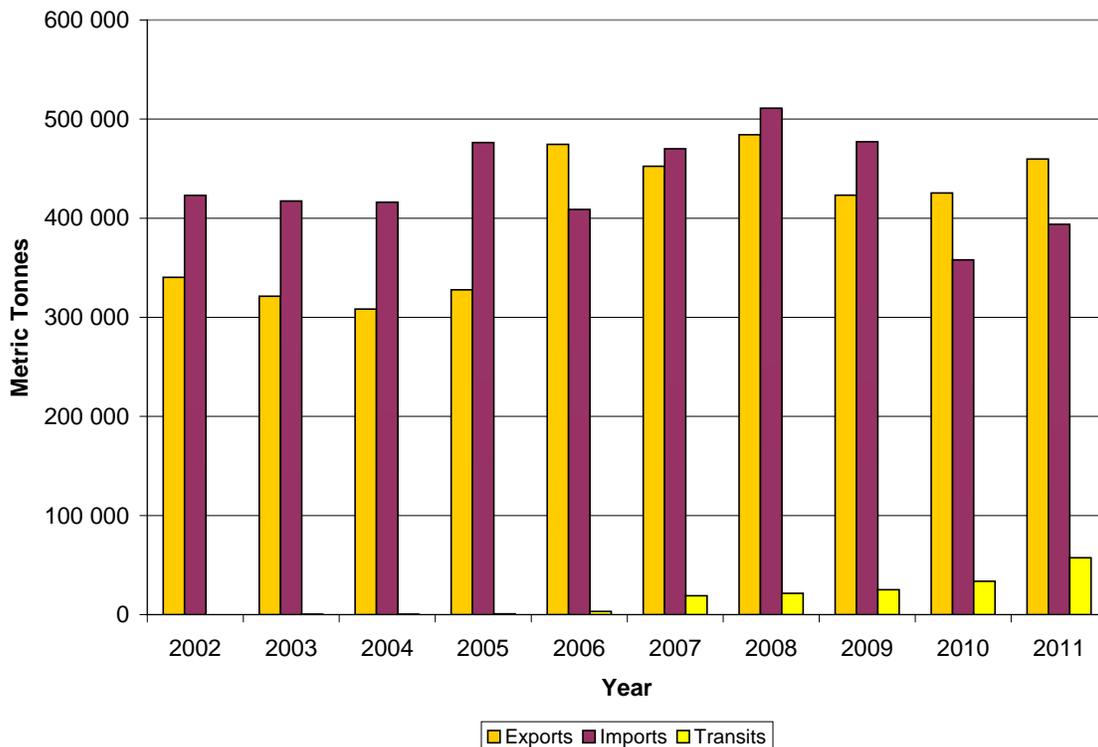
In order to implement the terms of these international agreements, Canada relies on regulations made under the authority of the *Canadian Environmental Protection Act, 1999*. In 1992, regulations were introduced to control and track movements of hazardous waste. In 2005, Canada improved and reinforced its former control regime by adopting the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (EIHWRMR).

The EIHWRMR regulate international movements of hazardous waste and hazardous recyclable material out of, into and through Canada. The statistics presented below show the status of imports, exports and transits for the year 2011. They also present information on the type of operation to be conducted on the hazardous waste or hazardous recyclable material following the import, export or transit. The disposal and recycling operations described in this document are listed in Schedules 1 and 2 of the EIHWRMR.

The 2011 Statistics on the International Movements of Hazardous Waste and Hazardous Recyclable Material

In 2011, the total quantity of hazardous waste and hazardous recyclable material imported into Canada and exported from Canada increased from the previous year (Figure 1). Furthermore, the total quantity of hazardous waste and hazardous recyclable material transiting through Canada has been increasing since 2006 (Figure 1).

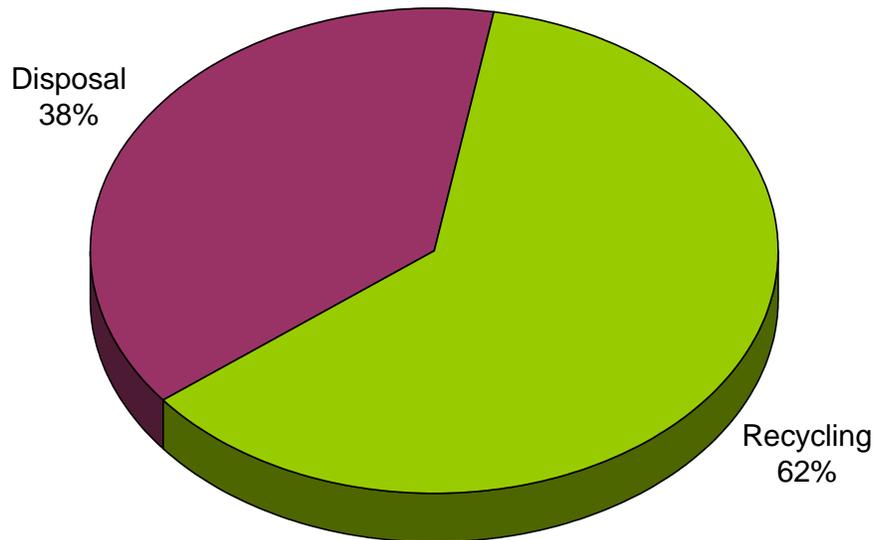
Figure 1
Exports, Imports and Transits of Hazardous Waste and Hazardous Recyclable Material 2002–2011



1. Imports

The total imported quantity of hazardous waste and hazardous recyclable material increased by 10%, from approximately 358 007 metric tonnes in 2010 to 393 930 metric tonnes in 2011 (Figure 1). Of the total imported quantity in 2011, 62% was hazardous recyclable material destined for recycling and 38% was hazardous waste destined for disposal (Figure 2), while in 2010, the proportions were 59% and 41% respectively. In 2011, the quantity destined for recycling increased by 15% from 2010, while the quantity destined for disposal increased by 3%.

Figure 2
Type of Operation for 2011 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material

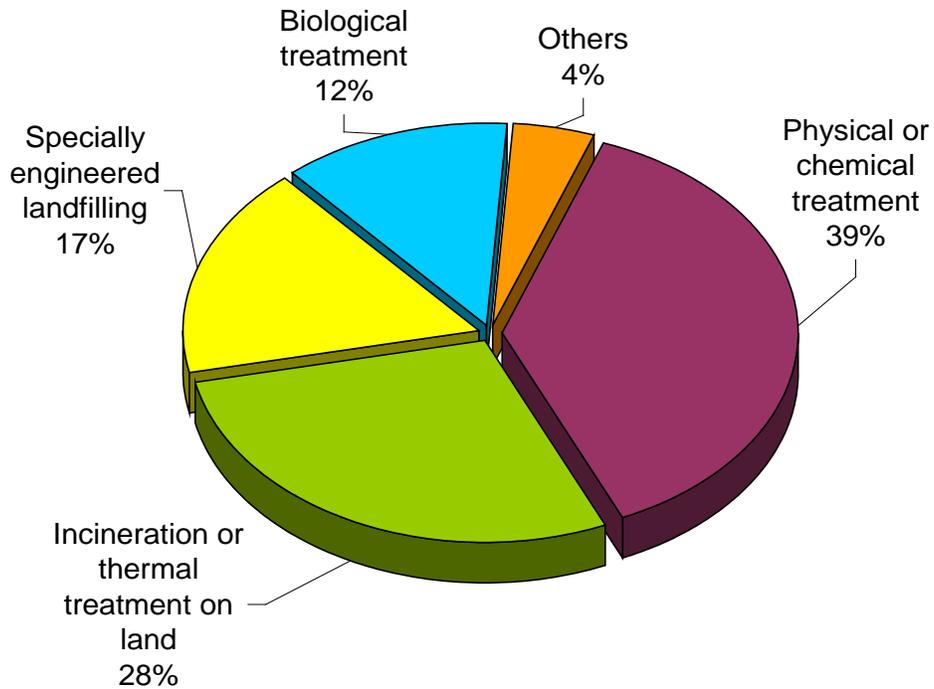


In 2011, more than 99% of the imported quantity of hazardous waste and hazardous recyclable material came from the United States. The remaining imports came from countries such as Switzerland, United Kingdom, France and Germany, and were mostly hazardous recyclable material destined for metal recovery operations.

Hazardous waste imported in 2011 included metal and mineral wastes, flammable liquids, waste phenols, and phenol compounds together with organic solvents. Spent or used lead acid batteries, lubricating oils, metal and mineral wastes, and organic solvents made up the majority of the hazardous recyclable material imported in 2011.

Imports of hazardous waste destined for disposal either underwent physical or chemical treatment (39%), were incinerated on land (28%), were sent to specially engineered landfills (17%) or underwent biological treatment (12%) (Figure 3). The remaining 4% included interim operations such as blending or mixing, repackaging or temporary storage.

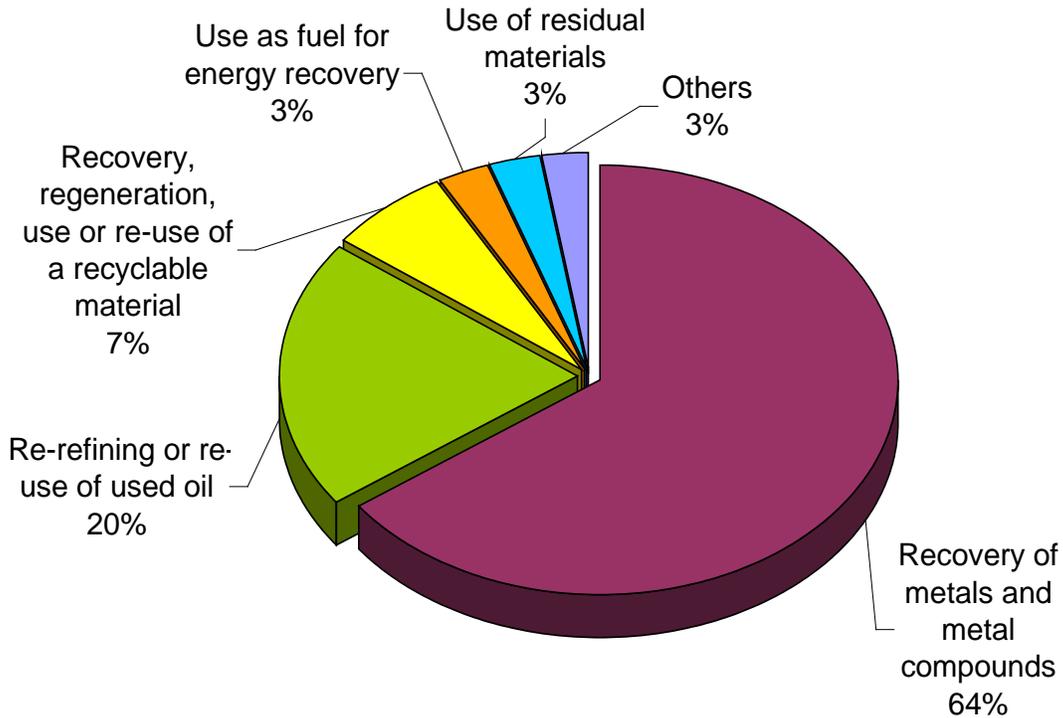
Figure 3
2011 Canadian Imports of Hazardous Waste by Disposal Operation



Note: In the case of interim operations, hazardous waste underwent a final operation such as specially engineered landfilling, physical or chemical treatment, and incineration or thermal treatment on land.

As for the hazardous recyclable material imported in 2011, the majority was destined for recovery of metals and metal compounds (64%) and re-refining or re-use of used oil (20%) (Figure 4). The “Others” category includes recovery or regeneration of solvents, interim operations such as accumulation or temporary storage prior to recycling, and recovery of components used for pollution abatement.

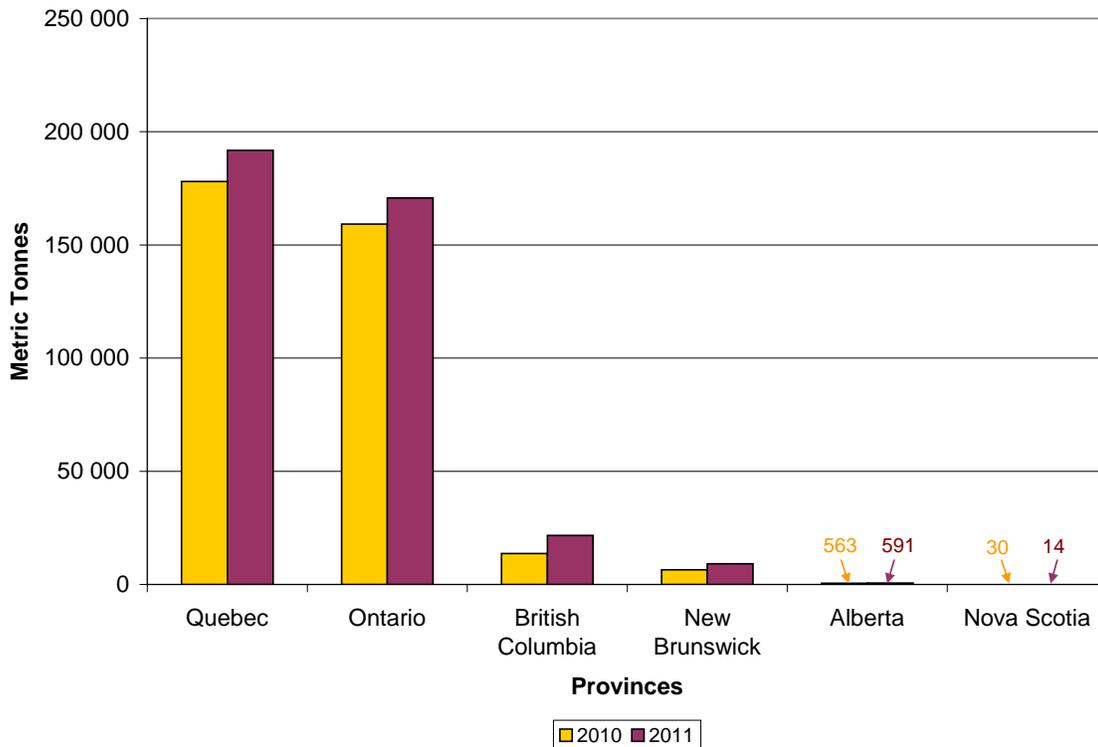
Figure 4
2011 Canadian Imports of Hazardous Recyclable Material by Recycling Operation



Note: In the case of interim operations, the majority of hazardous recyclable material underwent a final operation such as recovery of metals and metal compounds or use as a fuel in an energy recovery system.

In 2011, imports of hazardous waste and hazardous recyclable material were destined to six Canadian provinces, with Quebec and Ontario receiving 92% of all imports into Canada. The other four provinces that received imports of hazardous waste and hazardous recyclable material were British Columbia, New Brunswick, Alberta and Nova Scotia. No imports of hazardous waste or hazardous recyclable material were made into any of the territories or other provinces (Figure 5).

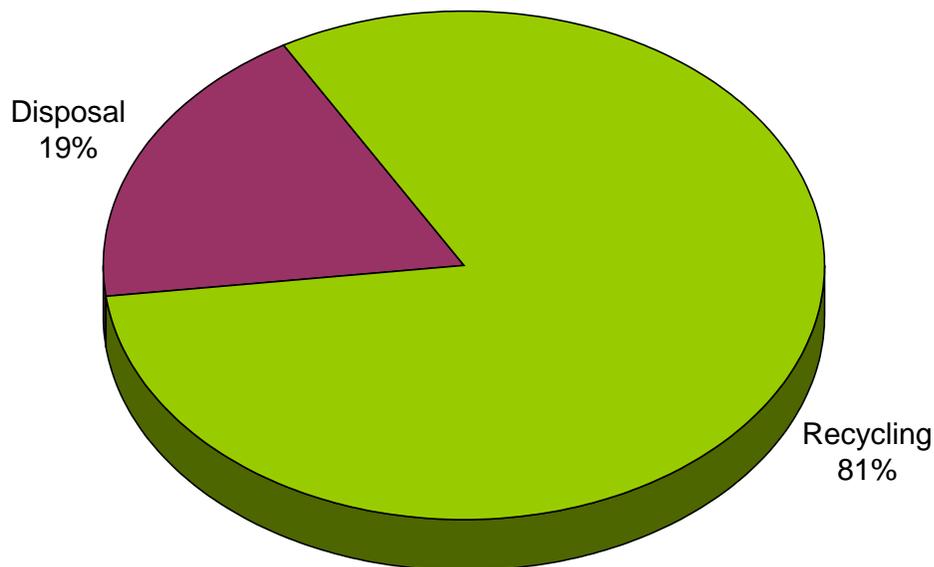
Figure 5
Comparison of 2010–2011 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material by Province



2. Exports

The quantity of hazardous waste and hazardous recyclable material exported increased by 8%, from 425 379 metric tonnes in 2010 to 459 694 metric tonnes in 2011 (Figure 1). Of the total quantity exported in 2011, 81% was destined for recycling and 19% was destined for disposal (Figure 6), while in 2010, the proportions were 84% and 16% respectively. In 2011, the quantity destined for recycling increased by 5% from 2010, while the quantity destined for disposal increased by 22%.

Figure 6
Type of Operation for 2011 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material

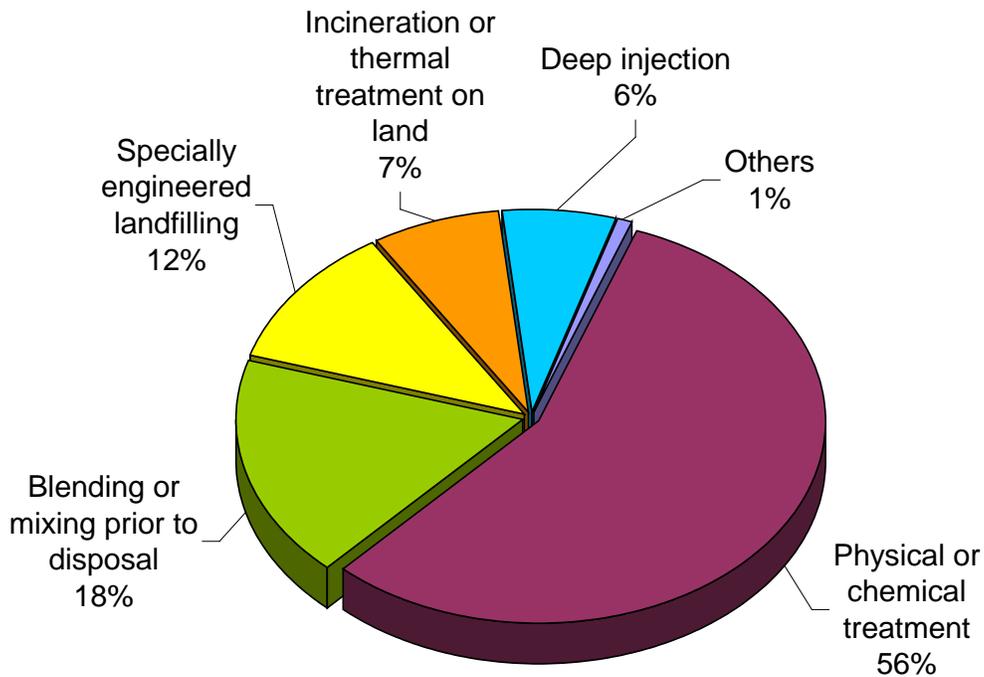


Approximately 97% of all exports of hazardous waste and hazardous recyclable materials were destined to the United States. The bulk of these shipments were managed by facilities in the northeastern and central United States. The remaining exports were sent to Germany, Belgium, Republic of Korea and Mexico.

Hazardous waste exported in 2011 included aluminum remelting or smelting by-products, waste acidic solutions and wastes that contain inorganic fluorine compounds. Spent sulfuric acid, wastes from wood-preserving chemicals together with metal and mineral wastes made up the majority of the hazardous recyclable material exported in 2011.

The majority of exports of hazardous waste destined for disposal underwent physical or chemical treatment (56%) or blending or mixing prior to their final disposal (18%) (Figure 7). In this last case, the majority of hazardous waste underwent a release into or onto land as final operation. The “Others” category includes operations such as permanent storage, interim operations like repackaging or temporary storage prior to disposal, and other release or treatment.

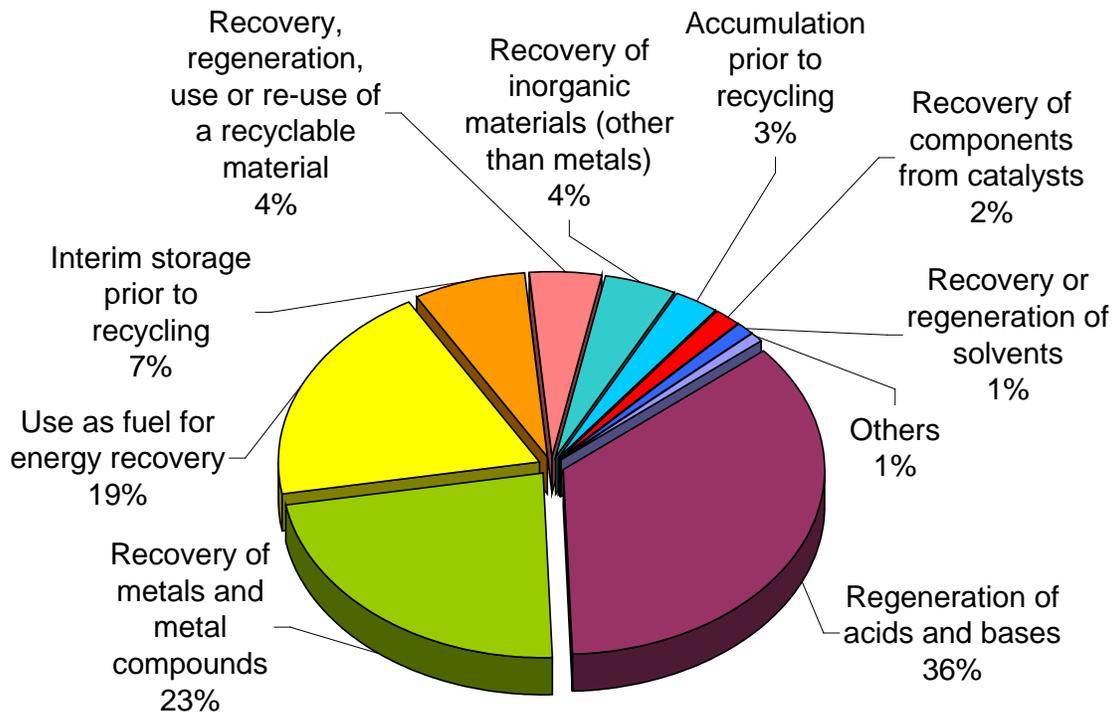
Figure 7
2011 Canadian Exports of Hazardous Waste by Disposal Operation



Note: Interim operations were generally followed by incineration or thermal treatment on land.

As for the hazardous recyclable materials exported in 2011, the majority was sent in order to regenerate acids or bases (36%), to recover metals and metal compounds (23%), or to be used as fuel in an energy recovery system (19%) (Figure 8). The “Others” category includes re-refining or re-use of used oil and recovery of organic substances.

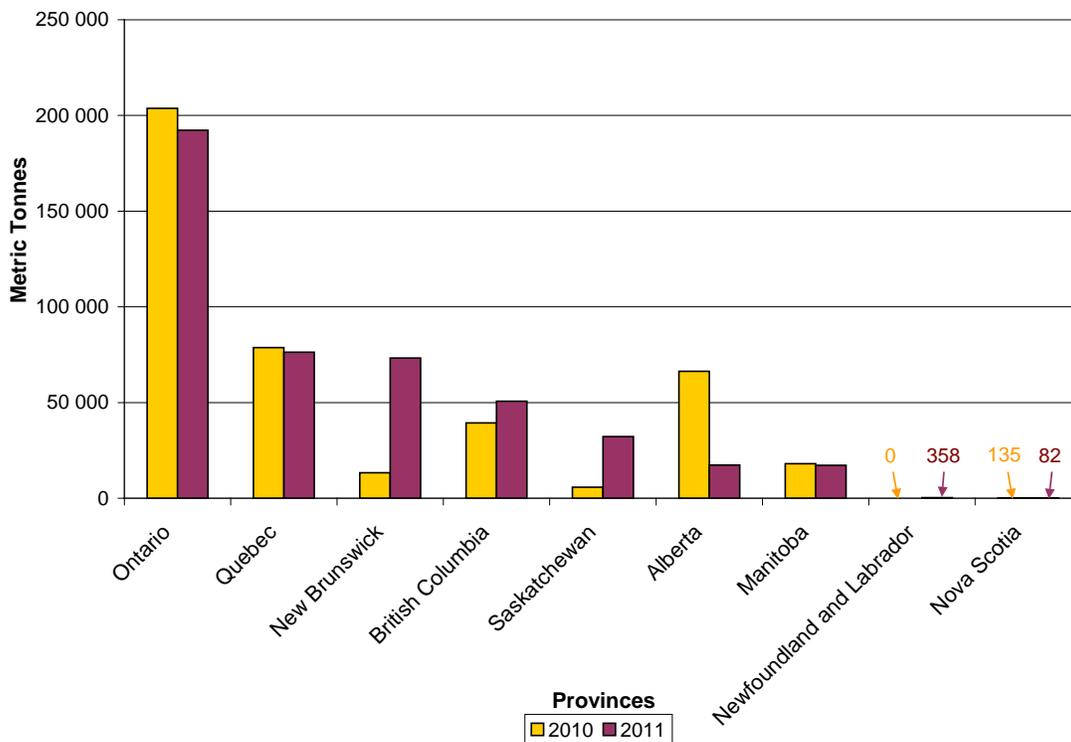
Figure 8
2011 Canadian Exports of Hazardous Recyclable Material by Recycling Operation



Note: Interim operations such as temporary storage and accumulation prior to recycling were generally followed by use of the material as a fuel in an energy recovery system.

In 2011, exports of hazardous waste and hazardous recyclable material originated from nine provinces, with Ontario accounting for 42% of the total quantity (Figure 9). The quantity of hazardous waste and hazardous recyclable material exported increased in New Brunswick and in Saskatchewan, while the quantity exported from Alberta decreased and quantities exported from other provinces remained relatively stable from the previous year. Newfoundland and Labrador did not export any hazardous waste or hazardous recyclable material in 2010 but did in 2011. No exports were made from Prince Edward Island and the three territories.

Figure 9
Comparison of 2010–2011 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material by Province



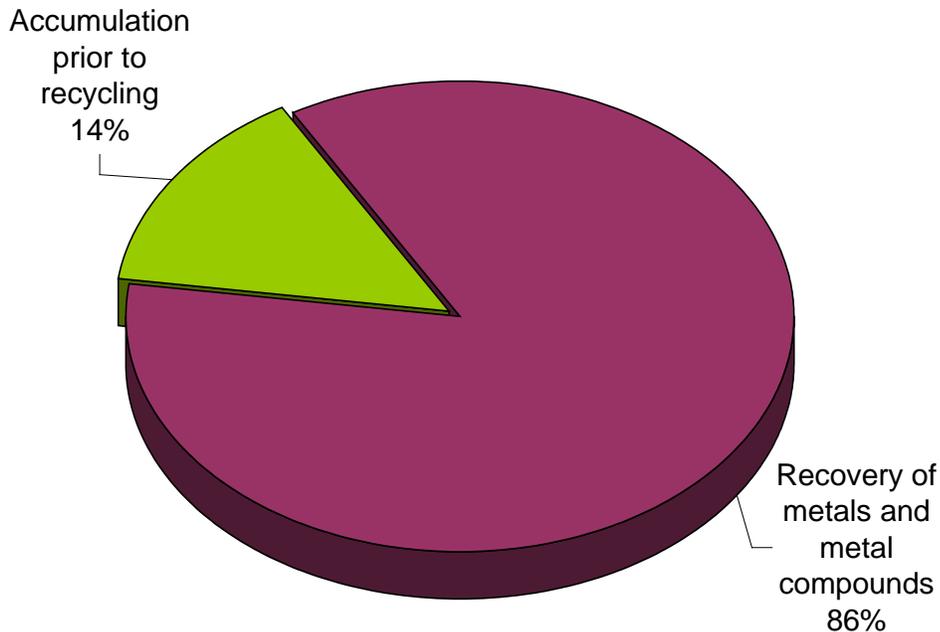
3. Transits

In 2011, the quantity of hazardous waste and hazardous recyclable material that transited through Canada was 57 327 metric tonnes. This is an increase of 70% or 23 602 metric tonnes compared to 2010. This increase in quantity can be mostly attributed to increased movements between two specific facilities. As in the previous year, all of the transits through Canada were shipments between U.S. states.

Of the total quantity of hazardous waste and hazardous recyclable material transiting in Canada, 57 311 metric tonnes (99.97%) were destined for disposal and 16 metric tonnes (0.03%) were destined for recycling. More than 99% of hazardous waste that were conveyed in transit through Canada were wastes from the production, formulation and use of biocides and phytopharmaceuticals and corrosive liquids, which were destined for disposal by incineration or thermal treatment on land. The remainder was sent to specially engineered landfills or underwent physical or chemical treatment.

The majority of hazardous recyclable material that was conveyed in transit through Canada was hazardous material containing mercury destined for recovery of metals and metal compounds (86%) (Figure 10). The remaining hazardous recyclable material was accumulated prior to recycling and was then used as a fuel in an energy recovery system.

Figure 10
2011 Transits of Hazardous Recyclable Material by Recycling Operation



For more information, please visit [Environment Canada's Pollution and Waste website](#) or contact:

Waste Reduction and Management Division

Environment Canada

TMB@ec.gc.ca

819-997-3377

www.ec.gc.ca

Additional information can be obtained at:

Environment Canada

Inquiry Centre

10 Wellington Street, 23rd Floor

Gatineau QC K1A 0H3

Telephone: 1-800-668-6767 (in Canada only) or 819-997-2800

Fax: 819-994-1412

TTY: 819-994-0736

Email: enviroinfo@ec.gc.ca