

KPMG

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1994



Canadian Environmental
Management Survey

The 1994 KPMG Canadian Environmental Management Survey

KPMG Environmental Services Inc. is a specialized professional practice serving the needs of our clients for strategic advice on environmental issues and offering comprehensive service in the area of environmental management. Our staff includes environmental management consultants, engineers and accountants — a multi-disciplinary group working together to resolve environmental issues with our clients.

Internationally, KPMG is a member of the KPMG International Environmental Practice. The International Practice is composed of experienced full-time practitioners in Canada, the United States, United Kingdom, and many countries in continental Europe, enabling us to advise clients on environmental issues in these jurisdictions.

Our experience has indicated that, although Canadian organizations accept that environmental issues must play an increasing role in their decision-making processes, there is tremendous diversity in the approach to these issues. In the summer of 1994, this survey was undertaken to find out how environmental considerations have impacted Canadian organizations to date. The results confirm that environmental management is not yet well understood and that organizations are in a state of change. We intend to conduct a similar survey regularly in order to provide current information and feedback on their progress.

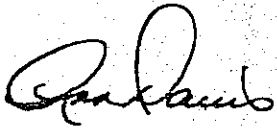
In addition to both privately held and public Canadian corporations, our survey included municipalities, universities, school boards and hospitals. These sectors represent a significant portion of the nation's economic activity. Their approach to environmental issues is of equal concern to that of corporate Canada.

B E N C H M A R K I N G Y O U R O R G A N I Z A T I O N

The survey results provide a snapshot of the current status of the impact of environmental concerns on the management of Canadian organizations. The results provide useful insight for organizational leaders in several ways. For example:

- ▶ Industry practice is part of the criteria considered when performance is tested under circumstances such as prosecution by environmental regulators.
- ▶ Current industry-wide information enables organizations to benchmark themselves against others in their sector, understanding that the definition of "best practices" is continually changing and improving.

We hope that this report will give you a better understanding of where your organization fits in the "big picture" of environmental issues management in Canada.



V. Ann Davis, Partner

KPMG



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Executive Briefing

In Canada, expectations for environmental stewardship have risen and are continuing to rise sharply. People and organizations are calling for all of us to become even more accountable for our environmental actions.

In the summer of 1994, KPMG surveyed Canadian companies as well as hospitals, municipalities, universities, and school boards to capture a snapshot of the current state of the management of environmental risks and issues.

Despite rising demands, only 49% of respondents considered environmental issues important in their organization's overall planning activities, although 76% reported that their organization had established an environmental policy.

Further, the results of the survey indicate a range of differences in approach to this management responsibility, but even more significantly, a consistent, widespread lack of understanding of the implications of this responsibility and of the most effective management methods.

As might be expected, for 95% of respondents, compliance to regulations is the most important motivating factor, followed by personal liability of directors and officers.

Public pressure was reported as an important factor in significant percentages primarily in the municipalities, health sector, and education sector.

Numerous recent court cases, most especially the highly publicized *Bata* case in 1992, have raised management awareness of the range of serious penalties that result from environmental mismanagement.

Surprisingly, although the courts have provided some guidance as to what may constitute a defence of due diligence, the majority of survey respondents have not integrated such standards into their management activities.

69% of respondents stated that they had a management system in place to deal with environmental matters.

However, when asked to compare their management systems to that outlined in the world's leading standard, BS 7750, only 2.5% could claim to have incorporated all the key vital components.

It appears that many organizations believe that they have an effective system in place to deal with environmental issues. In reality, though, these systems are not sufficiently developed to ensure that organizations take advantage of all the opportunities to minimize environmental risk and issues.

The responses to our questions about why organizations do not have environmental management systems (EMS) indicate a widespread reactive, rather than proactive, approach.

63% of those who did not have EMS stated that it was because they dealt with issues on an "as required" basis.

Taken together with the responses to other survey questions, it appears that these organizations take action when and as required by regulation or when and as incidents occur.

In our experience, this "firefighting" approach may result in only the major environmental issues being brought to the attention of the officers and directors.

Minor issues may not be resolved, leaving the potential for them to become major issues with significant repercussions. The organizations may then receive unfavourable publicity when avoidable environmental incidents occur. Further, such an approach is not preventative but rather responds to issues after the fact.

Organizations may be leaving themselves open to charges of non-compliance, resulting in stiff penalties and fines for the organization.

The directors and officers may also be held personally responsible and liable for the environmental situations of their organizations.

In the public sector, just over half (57%) of municipalities had EMS in place, but none of those contained all vital components. Similarly, although 85% of health sector organizations reported established EMS, once again, none had all vital components as identified by the BS 7750.

The "firefighting" management approach was not the only reason given by organizations without EMS in place.

8% of respondents believe that an EMS is too expensive to implement, and 11% feel that establishing one would be too complicated.

In our experience, although a start-up time commitment is required, establishing an EMS does not require extensive financial investment, and may, in fact, identify cost savings. Since 49% of survey respondents identified cost savings as a primary motivator in taking action on environmental issues, it is clear that a greater understanding of EMS would help them to achieve important benefits.

In our experience as environmental management consultants, developing an EMS and integrating it into the organization's overall management systems can be accomplished efficiently and cost-effectively.

As to what environmental activities organizations are engaging in currently, the leading management tool employed is internal incident reporting to management at 60%, followed by environmental audits at 59%. Because there are no formalized Canadian standards for environmental audits or the reports in which they result, it is not surprising that the survey results indicate that the term "environmental audits" means different things to different people. This can pose serious problems if an organization does not define its objectives clearly prior to embarking on an environmental audit program.

However, it is encouraging that 90% of those respondents who do conduct environmental audits of some kind, do include recommendations for improvements in the audit report. 85% also state that there is formal follow-up on those recommendations.

Internationally accepted definitions of environmental auditing are under development with significant contribution from Canada. The Canadian Standards Association (CSA) recently completed its document, Z751-94 "Guidelines for Environmental Auditing: Statement of Principles and General Practices." We believe the practical application of this standard will include audits of EMS to assess compliance with standards such as BS 7750, compliance with corporate policy and procedures, as well as independent attestation of environmental performance reports.

Environmental performance reports detail an organization's achievement against the objectives set by the organizations, and once again, there are no generally accepted standards for such measures.

60% of survey respondents prepare environmental performance reports that are distributed to internal personnel with limited distribution to external stakeholders.

To date, there has been little direct demand from stakeholders for environmental reports to be subjected to independent review or attestation.

47% of survey respondents foresee an increasing demand for external environmental performance reporting during the next five years.

Presently, organizations employ a range of external professionals, such as management consultants, lawyers and engineers to help manage environmental risks and issues, most often when help is sought to correct a situation that has been caused by an environmental issue or incident.

To manage environmental issues, organizations have allocated resources in varying degrees.

Among study participants who reported establishing an environmental budget category, these budgets often included health and safety considerations, indicating that these areas are closely aligned in organizations. Less than half (44%) reported having staff with full-time responsibility for environmental issues.

We believe that this study reveals that only a small percentage of Canadian organizations are effectively managing environmental risks currently.

On the other hand, 87% of the respondents foresee the impact of environmental issues increasing during the next five years, and it could be expected that organizations' understanding and management competence around these issues will increase as well.

KPMG intends to monitor the progress of environmental management in Canada, by conducting a similar survey regularly.

The results will provide benchmark information to organizations struggling to manage environmental issues.

Summary of Findings

The majority of the survey respondents described themselves as knowledgeable about the environmental issues of their organization and its environmental performance. 56% said that they were knowledgeable, 32% reported that they were very knowledgeable, and 12% responded that they were somewhat knowledgeable.

The respondents' answers to other questions reveal significant variations in their understanding of the issues, their motivations, and their approaches to environmental issues.

MOTIVATING FACTORS

For 95% of respondents, compliance to regulations was an important motivating factor.

Charges of non-compliance may result in stiff penalties and fines for the organization. The directors and officers may also be held personally responsible and liable for the environmental situations of their organizations.

Personal liability of directors and officers was considered an important factor by 69% of all respondents. In the natural resources sector, 80% of respondents considered directors' and officers' liability as being an important factor influencing their organizations to take action on environmental issues. However, only 27% of all respondents have established environmental committees at the Board of Director level.

Personal liability has been evidenced in numerous recent court cases. Penalties for directors and officers have ranged from fines from which the company cannot indemnify the officers and directors, to jail sentences.

In the *Bata* case (1992), the court provided some guidance as to what may constitute a defence of due diligence, noting, "One would expect to find remedial and contingency plans for spills, a system of ongoing audit, training programs, sufficient authority to act and other indices of a proactive environmental policy."

In fact, these components comprise the framework of environmental management systems, the area in which our study discovered significant gaps.

According to survey respondents, organizations do consider the public, customers, and employees as important factors in motivating them to take action on environmental issues.

62% of respondents considered employees as an important factor.

Public pressure was an important factor to municipalities, the health sector and the education sector with responses at

76%, 63%, and 52%, respectively. The manufacturing sector had the fewest respondents who considered public pressure an important factor.

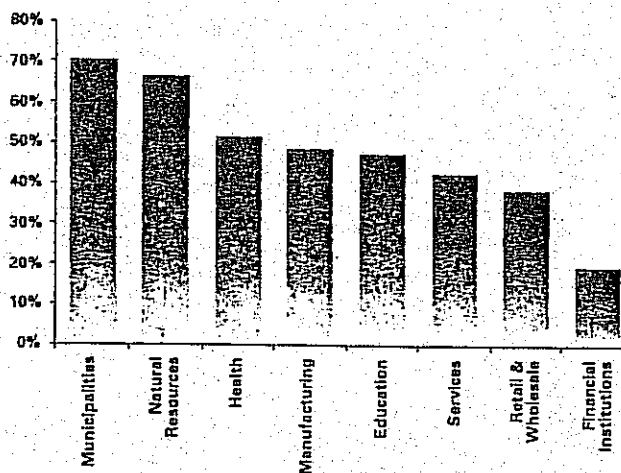
The principal motivators were:

▶ compliance to regulations	95%
▶ director/officer liability	69%
▶ employees	62%
▶ cost savings	49%
▶ customer requirements	49%
▶ insurers' requirements	46%
▶ shareholders' concerns	42%
▶ public pressure	40%
▶ marketing advantages	32%
▶ underwriters' requirements	29%
▶ lenders' requirements	26%
▶ international standards	25%
▶ supplier requirements	22%
▶ environmental interest groups	16%
▶ voluntary government programs	16%
▶ trade considerations	10%

INFLUENCE ON PLANNING

49% of respondents considered environmental issues important in overall planning activities.

INCORPORATION OF ENVIRONMENTAL ISSUES IN OVERALL PLANNING ACTIVITIES



20% of financial institutions considered environmental issues as important in overall planning activities. 8% of the respondents in this sector had not considered environmental issues in planning activities.

In our experience, among financial institutions, chartered banks are most advanced in considering environmental issues in credit granting and their loan portfolios.

Since certain provincial legislation holds that anyone who has or has had ownership, management or control of contaminated property may be held responsible for environmental impairment, lenders must be cautious of environmental risks due to lender liability for the costs associated with environmental issues.

When lenders realize on contaminated property held as security in a loan agreement, they may find themselves liable for its clean-up. Lenders may be treated as if they were the polluters and they may be liable under administrative orders or even subject to prosecution for environmental offences. The remediation costs could exceed the worth of the property and the lender may be left to pay costs that are far greater than the value of the loan or of the real estate realized as security.

To help minimize this risk, many lenders have begun requiring evidence of proper environmental management from borrowers. This evidence is often documented details of the borrower's environmental management system.

Given the risks they face, we suggest that financial institutions should consider assigning greater priority to environmental issues in their overall planning activities. Further, there are growing indications that all lenders and investors must pay more attention to environmental issues.

ENVIRONMENTAL POLICIES

76% of respondents reported that their organizations had established an environmental policy.

In order for an environmental policy to be effective and help the organization achieve its environmental goals, it must be communicated to key stakeholders to ensure that everyone is aware of the organization's goals.

Of respondents reporting an existing environmental policy, 90% had communicated it to key stakeholders.

According to respondents with such policies, the main stakeholders to which they have been communicated were:

- ▶ employees (94%)
- ▶ senior management (90%)
- ▶ legal counsel (61%)

EMS DEFINED

69% of respondents stated that they had a management system in place to deal with environmental matters.

EMS defined

A properly designed environmental management system (EMS) provides a framework of processes designed to help an organization manage its environmental agenda and document its environmental performance in response to constantly changing laws and regulations; social, economic and competitive pressures, and environmental risks. An EMS operationalizes an organization's environmental policy and must be fully integrated into the complete management system of an organization to be effective.

The British Standards Institute's BS 7750 is currently recognized as the world's leading standard for EMS. It is widely anticipated that the worldwide EMS standards expected to be released in 1996 under the auspices of the International Organization for Standardization will reflect the components of BS 7750.

Under BS 7750, organizations are required to establish and maintain an EMS, including documenting and effectively implementing environmental procedures and instructions. Management must define a policy that is relevant, communicated, and implemented at all levels, and that is publicly available.

The policy must include a commitment to continual improvement, provide for the setting and publication of environmental objectives, state which of the organization's activities are covered by the EMS, and indicate how the environmental objectives will be made publicly available.

Organizational and personnel requirements are outlined relating to the following areas:

- ▶ establish objectives and targets and develop procedures to achieve them.
- ▶ define and document the responsibility, authority, and interrelations of key personnel whose activities can impact on the environment.
- ▶ identify in-house verification requirements and procedures and provide adequate resources and personnel for verification activities.
- ▶ appoint a management representative with responsibility to ensure that the requirements of the standard are implemented and maintained.
- ▶ establish communication and training programs to assure competency of relevant personnel.

The standard contains further requirements in terms of environmental effects, covering their communication and evaluation, and compliance with legislative, regulatory, and policy requirements.

Another component of the standard requires the establishment and maintenance of procedures to ensure contractors are made aware of relevant environmental management system requirements and provisions.

An environmental management manual is required, along with procedures for ensuring adequate and effective documentation.

The standard states that management responsibilities shall be defined to ensure that control, verification, measurement, and testing within individual parts of the organization are adequately coordinated and effectively performed.

The organization is required to establish and maintain a system of records in order to demonstrate compliance with the requirements of the EMS. It is also required that audit procedures be established and maintained. Finally, management must review the EMS adopted to satisfy the requirements of the standard, to ensure its continuing suitability and effectiveness.

In Canada, the need for very similar components was highlighted by the ruling in the *Bata* case discussed earlier. The judge determined that in order to have demonstrated due diligence, the directors and officers of the company must have fully established components such as those detailed in BS 7750.

EMS gaps revealed

Only 2.5% of the participants who claim to have environmental management systems incorporate all of the key vital components we identified that constitute an EMS under BS 7750.

It appears that many organizations believe that they have an effective system in place to deal with environmental issues, whereas, in reality these systems are not developed enough to ensure that organizations take advantage of all opportunities to minimize environmental risk and issues.

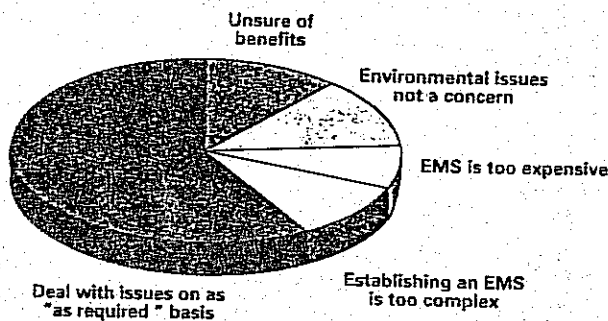
The components included in the survey respondents' environmental management systems were:

▶ environmental committees	62%
▶ employee training	57%
▶ detailed operating procedures	51%
▶ objectives established and regularly reviewed	50%
▶ risk-assessment process to assess environmental impact	47%
▶ communication strategies in place	36%
▶ preference given to suppliers with strong environmental performance	32%
▶ objectives communicated to stakeholders	26%

Of those who responded that they did not have a management system, the majority (63%) stated it was because they dealt with issues on an "as required" basis.

In our experience, this "firefighting" approach may result in only the major environmental issues being brought to the attention of the officers and directors. Minor issues may not be resolved, or the organization may receive unfavourable publicity when avoidable environmental incidents occur. Further, such an approach is not preventative but rather responds to issues after the fact.

WHY RESPONDENTS HAVE NO EMS



8% of respondents believe that an EMS is too expensive to implement.

In actual practice, an EMS does not require extensive financial investment, and may, in fact, identify cost savings.

To establish the system, some time commitment is required to identify areas of weakness and develop appropriate procedures.

However, once in place, the EMS can help the organization operate more efficiently, minimizing delays due to environmental incidents and helping to minimize the risk of fines and penalties resulting from non-compliance to legislation and regulations.

11% of respondents felt that establishing an EMS was too complicated.

Environmental management consultants can help organizations identify weaknesses in existing management systems and incorporate within those systems solutions to fulfil the requirements of standards such as BS 7750.

ENVIRONMENTAL AUDITS

78% of respondents stated that they conduct environmental audits.

Defining environmental audits

In Canada, unlike financial audits, environmental audits lack formal standards, although a number of independent organizations are in the process of developing them.

Because of the lack of formalized standards, users of environmental audit reports may not be able to place the same level of reliance on them as they would on financial audit reports.

Audit gaps revealed

Survey participants identified a range of reasons why they conduct environmental audits. Their reasons included assessing:

- | | |
|--|-----|
| ▶ compliance to legislation and regulation | 89% |
| ▶ the environmental condition of a property | 74% |
| ▶ environmental risks | 73% |
| ▶ compliance to own policies and procedures | 64% |
| ▶ performance relative to recognized standards | 55% |
| ▶ effectiveness of own EMS | 53% |

The wide range of reasons for conducting environmental audits demonstrates that the term environmental audit mean different things to different people. This can pose serious problems if an organization does not define its objectives clearly prior to embarking on an environmental audit program.

An environmental audit report is usually prepared at the end of the audit, detailing the deficiencies found during the audit. Since no standards exist for the audits, environmental audit reports are varied in their design and content.

90% of those respondents who conduct environmental audit include recommendations for improvements in the audit report.

Their response confirms that an environmental audit goes beyond simply reviewing the environmental situation of an organization but it is an effort to help identify and rectify any shortcomings identified by the exercise.

Continuous improvement of an EMS is an essential step in ensuring its effectiveness. Formal follow-up on recommendations helps to ensure such continuous improvement.

85% of the respondents stated that there is formal follow-up on the recommendations included in the audit report.

Internationally accepted definitions of environmental auditing are under development with significant contribution from Canada. The Canadian Standards Association (CSA) recently completed its document, Z751-94 "Guidelines for Environmental Auditing: Statement of Principles and General Practices." We believe the practical application of this standard will include audits of EMS to assess compliance with standards such as BS 7750, compliance with corporate policy and procedures, as well as independent attestation of environmental performance reports.

According to BS 7750, environmental management audits should be carried out in order to determine:

- ▶ whether environmental management activities conform to the environmental management manual, program (EMS), procedures and work instructions (detailed operating procedures), and are implemented effectively.
- ▶ the effectiveness of the EMS in fulfilling the organization's environmental policy.

Environmental audits may be conducted either by a team of internal employees who are independent of the audited area, by an external team, or by a combined team.

PERFORMANCE REPORTING

60% of survey respondents prepare environmental performance reports.

Environmental performance reports detail an organization's achievement against the objectives set by the organization. They report on the quantification of environmental performance or the comparison of performance with previously established benchmarks.

As with environmental audits, there are no generally accepted standards for environmental performance measurement and thus for the reports. Nevertheless, an organization that develops a set of environmental performance measures and reports on its progress will see many benefits, including reinforced environmental policies, improved efficiency and productivity, and improvements in its EMS.

Environmental performance reports help to increase internal awareness and document performance for the benefit of concerned stakeholders.

The environmental performance areas reported on most frequently are:

▶ compliance with environmental regulations	90%
▶ waste reduction	66%
▶ performance against established objectives	56%
▶ environmental impacts	54%
▶ emissions/effluent reduction	54%

While organizations prepare a great deal of information on their performance, it is usually distributed to internal personnel, with only limited distribution to external stakeholders.

At this time, few Canadian corporations have developed comprehensive environmental performance reports, however, an increasing number are addressing these issues with their annual reports. We believe there will be increasing demand by external stakeholders for information on an organization's environmental performance reporting.

92% of respondents have not yet experienced stakeholders expressing a desire for environmental reports to be subjected to independent review or attestation.

47% of respondents foresee demand increasing during the next five years for the independent review of external performance reports.

In our experience, independent review or attestation helps to add credibility to the report.

USE OF CONSULTANTS

Some organizations use external professionals, such as management consultants, lawyers, and engineers to help manage environmental risks and issues.

External professionals may be engaged for specific projects or to provide ongoing advice and guidance.

Survey respondents most frequently sought the advice of engineering technical consultants (38%), followed by legal advisors (29%), management consultants (23%), and communications consultants (22%).

Traditionally, the assistance of engineers and legal counsel has been sought to help correct a situation that has already been caused by an environmental issue or incident.

Communications consultants are then called upon to help with external communications maintaining an organization's image and reputation.

Environmental management consultants are more likely to be involved with the development of EMS and the integration of that system with the whole management system.

RESOURCE ALLOCATION

Among the range of tools survey respondents identified as most helpful in managing environmental risks, the top five were:

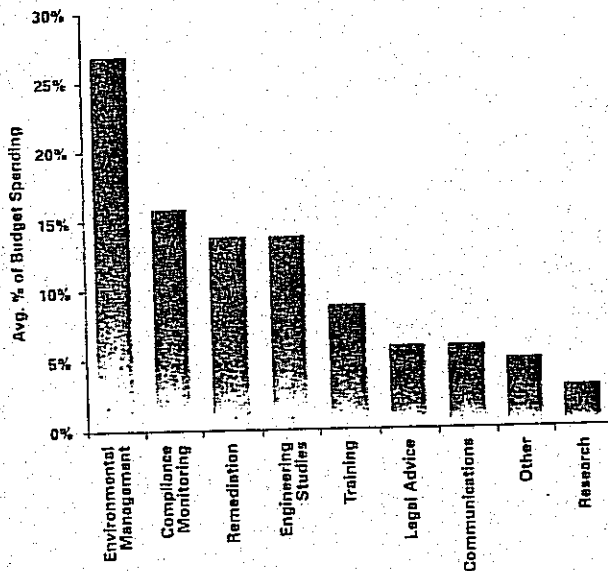
▶ internal incident reporting to management	60%
▶ environmental audits	59%
▶ frequent monitoring to ensure compliance with regulations	57%
▶ environmental site assessments	56%
▶ staff environmental training	51%

ENVIRONMENTAL BUDGETS

29% of participants responded that their environmental budget included health and safety considerations, indicating that these areas are closely aligned in organizations.

The remaining areas covered by environmental budgets are:

ENVIRONMENTAL BUDGET COMPONENTS



Environmental budgets may incorporate the costs of staffing environmental departments.

44% of all respondents have staff with full-time responsibility for environmental issues.

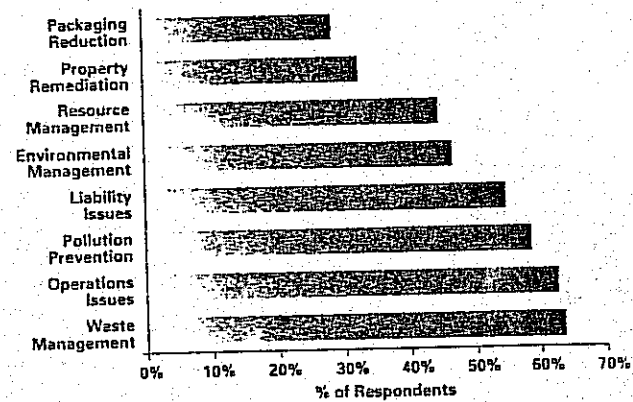
EMERGING ISSUES

Our survey found that while 68% of respondents consider responding to government regulations to be an important issue in the next 12 months, many respondents consider preventative measure issues to be equally important. The responses illustrate that Canadian organizations are recognizing that there is a need to shift from a reactive approach, dealing with issues only once they occur, to a preventative approach, which helps minimize the risk of incidents occurring in the first place. Issues that respondents identified as important included waste management (64%), operational issues (63%), and pollution prevention (59%). The priority given to these issues reflects the trend of organizations away from reacting to issues towards developing a preventative approach. Tangible benefits of

such an approach can include reduced energy costs and lower waste-disposal costs. Benefits may also include reduced risk and liability, and improved staff motivation.

In addition to responding to government regulations, the important issues to respondents during the next 12 months are illustrated in the graph below.

IMPORTANT ISSUES 1984-1995



IMPLICATIONS FOR THE FUTURE

87% of the respondents foresee the impact of environmental issues increasing during the next five years.

Environmental issues are no longer simply a question of technical and legal compliance but an important management responsibility.

If organizations are going to be prepared to deal effectively with environmental risks and minimize the impact of environmental issues, they must begin to develop effective environmental management systems. These EMS will need to be fully integrated into existing management systems and become a part of everyday life for organizations.

We believe that this study reveals that only a small percentage of Canadian organizations are effectively managing environmental risks currently.

KPMG intends to monitor the progress of how organizations manage these issues by conducting the KPMG Canadian Environmental Survey on a regular basis.

The survey results will help us to identify trends and change in the approaches to environmental management, and to provide benchmark information to organizations struggling to manage these issues.

About the Research

We surveyed the 1,000 largest companies in Canada as ranked by *The Financial Post*, 500 companies from the Canadian Corporate Disclosure database (sales under \$28 million), as well as hospitals, municipalities, universities, and school boards from across Canada.

In total, 1,754 surveys were mailed, and 361 responses were received prior to the cut-off date for analysis. Therefore, the response rate was 21%. We divided respondents into major market sectors to provide greater insights into the environmental issues, efforts, and concerns of the different sectors.

The percentages of respondents in each of the sectors were:

Municipalities	6%
Financial Institutions	8%
Education	8%
Services	9%
Health	12%
Natural Resources	15%
Retail & Wholesale	20%
Manufacturing	22%
Total	100%

ABOUT THE PARTICIPANTS

All surveys were mailed to the chief executive officers/presidents/leaders/heads of the organizations. Actual respondents held a wide range of positions: chief executive officers; directors or managers of environmental affairs/services departments; directors of technical services; financial, legal, and human resources vice presidents; financial analysts; office managers; directors of health, safety and environment; treasurers; materials managers; and directors of public affairs were positions most frequently cited.

The range indicates that responsibility for the management of environmental risks and issues has not been allocated to one standard area within organizations. Because environmental issues can be so broad, and can touch on many different aspects of an organization, the responsibility for the environment has settled with many different departments.

The participating organizations ranged in size from under \$10 million to \$5 billion or more, based on level of sales or revenues.

There were several ownership styles:

Public sector	34%
Public companies	33%
Foreign-owned subsidiaries	18%
Canadian-owned private companies	13%
Private foreign partnerships	1%
Canadian partnerships	1%
Total	100%

All organizations were situated in Canada, but many were also operating in several other locations:

Canada only	58%
Outside of Canada	42%
North America	87%
Europe	51%
Asia	42%
Australia, Africa, South America	25%

Key Results by Sector

OVERALL RESPONSE

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 88%

Foresee increasing impact of environmental issues on the organization during the next five years. 87%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 95%
- ▶ Board of Director liability 69%
- ▶ employees 62%
- ▶ cost savings 49%
- ▶ customer requirements 49%

Top five environmental issues impacting organization over the next 12 months:

- ▶ responding to government regulations 68%
- ▶ waste management 64%
- ▶ operational issues 63%
- ▶ pollution prevention 59%
- ▶ liability issues 55%

Have environmental management system (EMS) in place. 69%

EMS has all vital components. 3%

Most helpful management tools:

- ▶ internal incident reporting 60%
- ▶ environmental audits 59%
- ▶ frequent monitoring 57%
- ▶ environmental site assessments 56%

Note results have been rounded off to the nearest whole number.

EDUCATION

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 90%

Foresee increasing impact of environmental issues on the organization during the next five years. 93%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 97%
- ▶ employees 74%
- ▶ Board of Director liability 61%
- ▶ marketing image 55%
- ▶ cost savings 55%

Top five environmental issues impacting organization over the next 12 months:

- ▶ waste management 81%
- ▶ operational issues 77%
- ▶ responding to government regulations 74%
- ▶ resource management 68%
- ▶ liability issues 55%

Have environmental management system (EMS) in place. 61%

EMS has all vital components. 5%

Most helpful management tools:

- ▶ internal incident reporting 61%
- ▶ frequent monitoring 61%
- ▶ staff training 52%
- ▶ environmental site assessments 43%

Complete detailed sectoral reports are available upon request. Please see page 16 for fax request.

FINANCIAL INSTITUTIONS

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 92%

Foresee increasing impact of environmental issues on the organization during the next five years. 88%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 81%
- ▶ Board of Director liability 73%
- ▶ shareholders' concern 46%
- ▶ cost savings 46%
- ▶ marketing image 42%

Top five environmental issues impacting organization over the next 12 months:

- ▶ liability issues 73%
- ▶ responding to government regulations 46%
- ▶ property remediation 38%
- ▶ waste management 31%
- ▶ EMS 27%

Have environmental management system (EMS) in place. 4%

EMS has all vital components. 0%

Most helpful management tools:

- ▶ environmental site assessments 69%
- ▶ environmental audits 54%
- ▶ legal advisors 50%
- ▶ engineering consultants 42%

Complete detailed sectoral reports are available upon request. Please see page 16 for fax request.

HEALTH

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 83%

Foresee increasing impact of environmental issues on the organization during the next five years. 98%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 100%
- ▶ employees 80%
- ▶ Board of Director liability 74%
- ▶ cost savings 67%
- ▶ public pressure 63%

Top five environmental issues impacting organization over the next 12 months:

- ▶ waste management 89%
- ▶ operational issues 85%
- ▶ responding to government regulations 80%
- ▶ pollution prevention 65%
- ▶ resource management 61%

Have environmental management system (EMS) in place. 85%

EMS has all vital components. 0%

Most helpful management tools:

- ▶ environmental audits 78%
- ▶ frequent monitoring 70%
- ▶ internal incident reporting 70%
- ▶ staff training 61%

Complete detailed sectoral reports are available upon request. Please see page 16 for fax request.

O V E R A L L R E S P O N S E

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- ▶ frequent monitoring 57%
- ▶ environmental site assessments 56%

Note results have been rounded off to the nearest whole number.

M A N U F A C T U R I N G

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 89%

Foresee increasing impact of environmental issues on the organization during the next five years. 88%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 93%
- ▶ Board of Director liability 74%
- ▶ employees 56%
- ▶ customer requirements 55%
- ▶ insurers' requirements 55%

Top five environmental issues impacting organization over the next 12 months:

- ▶ operational issues 63%
- ▶ waste management 63%
- ▶ responding to government regulations 62%
- ▶ pollution prevention 60%
- ▶ liability issues 51%

Have environmental management system (EMS) in place. 73%

EMS has all vital components. 2%

Most helpful management tools:

- ▶ environmental audits 62%
- ▶ internal incident reporting 61%
- ▶ staff training 54%
- ▶ environmental site assessments 52%

Complete detailed sectoral reports are available upon request. Please see page 16 for fax request.

M U N I C I P A L I T I E S

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 90%

Foresee increasing impact of environmental issues on the organization during the next five years. 100%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 95%
- ▶ public pressure 76%
- ▶ employees 57%
- ▶ cost savings 48%
- ▶ Board of Director liability 33%

Top five environmental issues impacting organization over the next 12 months:

- ▶ responding to government regulations 100%
- ▶ waste management 95%
- ▶ pollution prevention 86%
- ▶ operational issues 81%
- ▶ resource management 76%

Have environmental management system (EMS) in place. 57%

EMS has all vital components. 0%

Most helpful management tools:

- ▶ frequent monitoring 76%
- ▶ staff training 71%
- ▶ environmental site assessments 71%
- ▶ environmental audits 67%

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N A T U R A L R E S O U R C E S

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 99%

Foresee increasing impact of environmental issues on the organization during the next five years. 89%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 98%
- ▶ Board of Director liability 80%
- ▶ shareholders' concern 60%
- ▶ employees 55%
- ▶ customer requirements 45%

Top five environmental issues impacting organization over the next 12 months:

- ▶ responding to government regulations 78%
- ▶ operational issues 76%
- ▶ pollution prevention 73%
- ▶ waste management 58%
- ▶ liability issues 58%

Have environmental management system (EMS) in place. 78%

EMS has all vital components. 0%

Most helpful management tools:

- ▶ environmental site assessments 75%
- ▶ internal incident reporting 67%
- ▶ environmental audits 67%
- ▶ detailed operating procedures 62%

Complete detailed sectoral reports are available upon request. Please see page 16 for fax request.

OVERALL RESPONSE

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 88%

Foresee increasing impact of environmental issues on the organization during the next five years. 87%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 95%
- ▶ Board of Director liability 69%
- ▶ employees 62%
- ▶ cost savings 49%
- ▶ customer requirements 49%

Top five environmental issues impacting organization over the next 12 months:

- ▶ responding to government regulations 68%
- ▶ waste management 64%
- ▶ operational issues 63%
- ▶ pollution prevention 59%
- ▶ liability issues 55%

Have environmental management system (EMS) in place. 69%

EMS has all vital components. 3%

Most helpful management tools:

- ▶ internal incident reporting 60%
- ▶ environmental audits 59%
- ▶ frequent monitoring 57%
- ▶ environmental site assessments 56%

Note results have been rounded off to the nearest whole number.

RETAIL & WHOLESALE

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 81%

Foresee increasing impact of environmental issues on the organization during the next five years. 74%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 92%
- ▶ Board of Director liability 67%
- ▶ employees 57%
- ▶ customer requirements 55%
- ▶ insurers' requirements 49%

Top five environmental issues impacting organization over the next 12 months:

- ▶ responding to government regulations 57%
- ▶ pollution prevention 54%
- ▶ operational issues 53%
- ▶ waste management 53%
- ▶ liability issues 50%

Have environmental management system (EMS) in place. 65%

EMS has all vital components. 4%

Most helpful management tools:

- ▶ internal incident reporting 57%
- ▶ environmental site assessments 55%
- ▶ frequent monitoring 54%
- ▶ environmental audits 50%

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S E R V I C E

Knowledgeable/extremely knowledgeable about the organization's environmental issues and performance. 85%

Foresee increasing impact of environmental issues on the organization during the next five years. 80%

Top five factors influencing organization to take action on environmental issues:

- ▶ compliance with regulations 94%
- ▶ Board of Director liability 71%
- ▶ employees 60%
- ▶ cost savings 46%
- ▶ customer requirements 46%

Top five environmental issues impacting organization over the next 12 months:

- ▶ liability issues 57%
- ▶ pollution prevention 54%
- ▶ responding to government regulations 54%
- ▶ waste management 54%
- ▶ operational issues 51%

Have environmental management system (EMS) in place. 63%

EMS has all vital components. 5%

Most helpful management tools:

- ▶ environmental site assessments 66%
- ▶ environmental audits 57%
- ▶ staff training 51%
- ▶ internal incident reporting 51%

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For additional information

If you would like to discuss our survey, please contact Ann Davis at (416) 777-8587.

To request more information be sent to you, please complete and fax the request form, found on page 16, to us at (416) 777-3077.

At KPMG Environmental Services Inc., we assist our clients in making informed selections and strategic choices to best resolve their environmental issues. We offer a multi-disciplinary team of professionals including environmental management consultants, engineers and accountants who work together with our clients to develop timely and cost-effective solutions.

KPMG offers a wide range of services to meet the needs of clients:

- ▶ development, implementation, and third party review of environmental management systems;
- ▶ development of appropriate protocols for environmental audits and self-assessment programs;
- ▶ environmental audits;
- ▶ strategic advice and solutions for environmental issues and transactions;
- ▶ assistance with environmental performance reporting; and
- ▶ third party review of environmental reports.

KPMG is Canada's largest professional services firm, and provides environmental advisory services through its offices across the country.

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La version française des résultats du Sondage sur la gestion environnementale au Canada - 1994 peut être obtenue sur demande auprès de Yves Gauthier, du bureau Montréal.