Environmental Law Centre Clinic

Murray and Anne Fraser Building
University of Victoria
P.O. Box 1700 STN CSC
Victoria, BC, Canada V8W 2Y2
www.elc.uvic.ca

Mandatory Labelling for Hazardous Substances in Consumer Products

(2012-02-09)

Researcher: Michael McCabe

Date Published: August 2012

Mandatory Labelling for Hazardous Substances in Consumer Products

By Michael McCabe, law student

Supervised by Calvin Sandborn

August, 2012

Contents

Introduction

This paper explores legal options for implementing mandatory hazard labelling for consumer products in Canada. Unlike some jurisdictions, Canadian consumers are not currently granted a right-to-know when potentially harmful substances are present in products they purchase.

A significant body of advocacy work has been done in Canada on the issue of consumer product labelling. This paper will therefore attempt to bring together some of the most important ideas and identify the best ways to move forward with this initiative.

Throughout the discussion that follows, "consumer product" should be interpreted broadly to include virtually any product that can be purchased by consumers in Canada. The scope is therefore much wider than cleaning products or products typically thought of as containing chemicals. Hazardous (or potentially hazardous) substances are present in products used intimately on a daily basis, from electronics and toys to mattresses and shower curtains. The labelling laws advocated in this paper are meant to apply to a broad spectrum of goods.

First, arguments in favour of mandatory consumer product labelling are briefly canvassed. Second, an overview of current Canadian laws related to hazard labelling is provided. Third, consumer product labelling regimes from California and the European Union ("EU") are considered as learning opportunities for a Canadian model. Fourth, ideas for what legal approach is needed in Canada are put forward.

I. Why do Canadians need consumer product labelling laws?

Canadians come into contact with a vast array of chemical substances on a daily basis. The availability and use of chemicals has no doubt benefited society, but some chemicals are also a significant source of pollution and are linked to adverse human health outcomes. While a smokestack billowing thick, visible waste was once the poster child of pollution, a more apt image of pollution today might be the innocent-looking rubber duck.[1]

Despite the "chemicalization" of society, Canadian consumers have access to very limited information about chemical ingredients present in products they buy. In other words, no general "right-to-know" is recognized for Canadian consumers. The right-to-know concept is based on the premise that the public

[1] See Rick Smith, *Slow Death by Rubber Duck: how the toxic chemistry of everyday life affects our health* (Toronto: Knopf Canada, 2009).

should have access to information about hazardous substances to which they are exposed, whether through emissions, everyday purchases, or any other way that chemicals interact with the public. Increased interest in health and environmental issues has created a strong base of support for the right-to-know concept, as many Canadian consumers want to be able to make informed decisions about what products to buy. For example, a 2007 poll of eligible voters in BC found that 93.3% of respondents were in support of labelling toxins in household and consumer products.[2]

The case for mandatory labelling of hazardous substances in consumer products is strengthened by the fact that a right-to-know has been recognized for workers in Canada, and for consumers in other jurisdictions. In Canada, the Workplace Hazardous Materials Information System ("WHMIS") gives workers the right to know about a variety of acute and chronic hazards posed by substances to which they are exposed on the job. In California, consumers, and the public in general, have the right to know any time they may be exposed to a carcinogen or a reproductive toxin. In the European Union ("EU"), workers and consumers are both covered by a legislative scheme that communicates detailed information about hazards in products they encounter. It does not seem justifiable that Canadian consumers are not granted the same ability to make informed choices about potentially hazardous substances in products they purchase.

Mandatory consumer product labelling and the consumer right-to-know are consistent with the precautionary principle. The precautionary principle -- an oft-cited principle of international law that has been reflected in Canadian environmental legislation – basically states that where there are threats of serious or irreversible damage, lack of full scientific certainty should not prevent government from taking action.

Government regulators face a difficult task in determining when to allow, restrict, or prohibit a given chemical substance from being used in Canada. The inherent uncertainty of scientific evidence leads to extended, potentially endless, debate over whether a substance is sufficiently harmful to warrant restricting its entry into the marketplace (and environment). However, an "innocent until proven guilty" approach is inconsistent with the precautionary principle and represents a failure to learn the lessons of history. Examples of substances we once thought to be safe but now know to be highly toxic are numerous – lead, asbestos, and DDT are just a few examples.

---

[2] StratCom Strategic Communications, "BC Public Affairs Omnibus Survey – Confidential Report for Labour Environmental Alliance Society" (12 April 2007), online: http://leas.ca/UserFiles/File/StratCom%20poll%20explain.pdf .

Labelling consumer products for potentially hazardous substances can offer an important middle course for regulators. It falls short of banning a given substance -- but it allows the consumer to choose their risk tolerance. Mandatory hazard labelling of consumer products represents a means for the public to choose their own risk tolerance in the absence of full scientific certainty.

II. Canadian Context

Some background on the current state of the Canadian laws regulating hazardous substances is helpful before describing legal means of requiring hazard labelling for consumer products.[3] The nature of the current regime reveals why a new approach is needed.

The *Canadian Environmental Protection Act* ("CEPA") is the main federal statute impacting the regulation of chemicals. CEPA gives the government a broad mandate to protect the environment and human health. Decisions made under CEPA must apply a form of the precautionary principle, the notion that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation".[4] Under CEPA, certain substances are designated as "toxic", which may lead to further research and/or restrictions on the use of those substances in Canada. Despite its broad mandate and precautionary approach, CEPA does not provide much to protect or inform consumers against the presence of potentially chronically harmful chemicals in consumer products. A substance designated as "toxic" under CEPA may be present in consumer products without any way for the consumer to know.

A partial consumer right-to-know has been recognized since 2006 by the Cosmetics Regulation, made under the *Food and Drugs Act*, which requires ingredient labelling in products subject to the regulation. Cosmetic labels must identify ingredients and include necessary directions, warnings or cautions for safe use of the product.[5] However, the required labels do not require clear warnings and do not apply to unintentional ingredients. As a result, Canadian cosmetics could contain substances such as formaldehyde, a known carcinogen, without listing it on the label, because some preservatives used in

---

[3] This is not intended as a comprehensive overview; it is simply meant to illustrate the piecemeal approach currently taken to hazardous substances in Canada.
[4] *Canadian Environmental Protection Act*, SC 1999, c 33, preamble and s 2(1)(a).
[5] Health Canada, "General Requirements for Cosmetics" (2011), online: http://www.hc-sc.gc.ca/cps-spc/cosmet-person/indust/require-exige/index-eng.php#lcp .

cosmetics release formaldehyde as a by-product.[6] The limited right-to-know recognized by the Cosmetics Regulation does not amount to much.

The *Consumer Chemicals and Containers Regulations, 2001*, require the communication of some acute hazards, which pose an immediate threat to human health. So while consumers may be able to refer to a product label to determine that a product is flammable or corrosive, there is no parallel requirement to communicate chronic hazards, which can be just as deadly. Despite the introduction of a new *Canada Consumer Product Safety Act* ("CCPSA") in 2011, the issue of chronic hazard labelling for consumer products remains unaddressed.

The *Pest Control Products Act* is another federal act affecting the labelling of consumer products. In regulations made under that Act, requirements are set out for applying hazard labelling that includes the common chemical name and concentration of the active ingredient. Consumers therefore have access to some hazard information when purchasing pesticides.

As mentioned above, WHMIS gives Canadian workers a right to know when they are exposed to potentially hazardous ingredients. Through the federal *Hazardous Products Act* and legislation in each province, relatively extensive information about acute and chronic hazards is delivered to workers through Material Safety Data Sheets. An assessment of how effective the WHMIS system is in communicating hazard information is beyond the scope of this paper, but it is worth noting that the government has recognized a right-to-know in the workplace since 1988.

To summarize, there is presently a patchwork of laws at the federal level that could have an impact on labelling hazardous substances in consumer products. However, there is almost no communication of potential chronic hazards to consumers. There is legislation that regulates toxic substances and legislation designed to protect consumers, but consumers are generally left in the dark about what harmful ingredients might be lurking in their purchases.

III. What are other jurisdictions doing?

Canada is not the only nation confronting the issue of labelling chronic hazards in consumer products. Elsewhere, a consumer right-to-know has been recognized through product labelling legislation. California and the EU are recognized as leading jurisdictions for their laws that impact consumer product

[6] David Suzuki Foundation, "Canada's cosmetic regulation could use a make-over", online: http://www.davidsuzuki.org/issues/health/science/toxics/canadas-cosmetic-regulations-could-use-a-make-over/.

labelling. Below, California's "Proposition 65" and the EU's "CLP Regulation" are outlined along with some discussion of the pros and cons of each model.

California: Proposition 65

Background

The California "Safe Drinking Water and Toxic Enforcement Act of 1986" is better known as Proposition 65, in reference to the direct voter ballot initiative that brought the law into being. Under Proposition 65, the Office of Environmental Health Hazard Assessment ("OEHHA") maintains a list of substances known to the state to cause cancer, birth defects or reproductive harm. The list is updated at least annually and currently contains close to 900 substances.[7] Proposition 65 requires businesses to provide a "clear and reasonable" warning before knowingly exposing anyone to a listed substance. The scope of the law therefore extends beyond consumer protection to promote disclosure in the workplace and to the public generally.

In the consumer product context, a warning must be placed on the product label or posted at the retail outlet through shelf labelling or signs if the business is aware or believes that one or more listed chemicals may be present in a product. In most cases, product labelling is used to communicate the warning, though it is not required. The "clear and reasonable" warning message for consumer products must include the following language:

> "WARNING: This product contains a chemical known to the State of California to cause [cancer/reproductive toxicity/birth defects or other reproductive harm]."

The warning must be communicated in such a way "as to render it likely to be read and understood by an ordinary individual under customary conditions of purchase or use."[8] But beyond the prescribed wording, there are no substantive requirements to ensure the label is noticeable to the consumer. Nor are there requirements to identify the specific listed chemical(s) at issue.

The general requirement to warn of the presence of a listed substance has two main exceptions. First, businesses with less than ten employees and government agencies are exempt. Second, warnings are not required where the exposure to a listed substance is below a "safe harbour" level – concentrations so low they are believed to have no effect. For carcinogens, the "no significant risk level" is the level that would

[7] Office of Environmental Health Hazard Assessment, "Proposition 65", online: http://oehha.ca.gov/prop65/prop65_list/newlist.html.
[8] Proposition 65 Regulations Article 6, online: http://oehha.ca.gov/prop65/law/pdf_zip/RegsArt6.pdf.

result in no more than one excess case of cancer in 100,000 people exposed to that level of the chemical over a 70 year lifetime. For reproductive toxins, the "no observable effect level" is 1/1000th of the level shown to pose no harm to humans or laboratory animals. OEHHA develops "safe harbour" numbers for listed substances reflecting this *de minimis* level of exposure. If levels of a listed substance are below the threshold, the business has "safe harbour" from Proposition 65 warning requirements. As long as a company can show concentrations of a listed substance to be below safe harbour levels, there is no need to provide a warning and no danger of being liable for breach of Proposition 65.

A key element of Proposition 65 is that substances may be listed without OEHHA setting a safe harbour level. The burden therefore falls to businesses wanting to produce and/or sell a product containing a listed substance to prove that the level is safe (if they want to avoid the warning requirement). For companies that want to avoid labelling their products as potential reproductive toxins or carcinogens and avoid potential liability for failure to provide a warning, a strong incentive is created to do the testing necessary to set safe harbour numbers.

Enforcement of Proposition 65 against potential offenders can be initiated by public prosecutors, but more commonly actions are brought by private citizens. Citizen enforcement provisions built into the legislation allow anyone to file an action. In an enforcement action, the defendant must prove that they are exempt from the warning requirement because any exposure to a listed chemical they caused was within safe harbour levels. Enforcement measures can include injunctions against the offender to stop the offending conduct and fines of up to $2500 per day.

Discussion

Much of Proposition 65's success is attributed to avoiding the most difficult question in toxic regulation – namely, how much of a toxic substance is too much? Even inherently hazardous substances may cause no harm at low enough concentrations. To permit the use of substances at safe concentrations, regulators typically set a standard to distinguish between acceptable and harmful use of a substance. But the process of deciding where to draw this line can be delayed endlessly due to gaps in scientific knowledge. The regulated community (i.e. producers who use potentially harmful substances) usually have an incentive to promote this perpetual delay.

Proposition 65 avoided this issue by allowing California to list chemicals without setting safe harbour levels. In effect, Proposition 65 "sliced through a Gordian knot of complex science that multiple federal

agencies have been struggling to untie since the 1970s".[9] The law accomplishes the relatively easy task of deciding which substances are inherently hazardous without tackling the more difficult task of deciding at what precise point those substances become harmful.

Because the offender bears the burden of proving compliance with Proposition 65 in an enforcement action, an incentive is created for industry to do the research that would allow a safe harbour level to be set. Otherwise, they would either have to provide the required warning (which may cause consumers to avoid their product) or provide no warning and risk having an action brought against them. Huge progress in standard setting was made after Proposition 65 came into force – industry was now begging government to set standards so they could know where their safe harbour was located.

Perhaps more importantly, Proposition 65 is widely recognized as having been successful in prompting companies to reformulate products to avoid listed substances. Evidence based on enforcement actions brought against alleged offenders reveals a preference among companies to eliminate or minimize the presence of listed chemicals in products rather than apply the clear and reasonable warning (keep in mind that Proposition 65 does not say that companies cannot use listed substances, just that they have to warn the public of the exposure). But there is no way to accurately measure the full impact of Proposition 65 in eliminating carcinogens and reproductive toxins from consumer products because many companies simply silently reformulated products to avoid labelling them.[10]

Such reformulations have had a broad impact. Typically if a product was reformulated for California, the reformulated version would be sold nationwide to avoid potential liability in other states for selling products containing known carcinogens or reproductive toxins.

While Proposition 65 has been successful in eliminating toxins in consumer products by encouraging product reformulation, it has been less successful in promoting a consumer right-to-know the contents of products. Criticisms of Proposition 65's labelling requirements suggest that the effectiveness of the labels in providing meaningful information to consumers is limited. The required warning, cited above, is fairly vague and there is no further statutory guidance in terms of what information companies must give to consumers. Consumers are not told which listed substance is contained in the product or the level or nature of risk posed by that particular product. Nor do the mandatory labels provide information about

[9] David Roe, "Little Labs Lost: an invisible success story" (2012) 15 Green Bag 2D 275 at 276, online: http://www.greenbag.org/v15n3/v15n3_articles_roe.pdf.
[10] *Ibid* at 281-2.

the means of exposure (for example, inhalation or absorption). While most products use product labelling (as opposed to signage on the shelves), there is no requirement that the labels be designed to attract attention – despite evidence that the use of pictograms is more effective in attracting consumer attention than mere words.[11] The required warning language – that the product "contains" a listed chemical – is not necessarily interpreted by consumers as meaning that the product will expose them to the chemical. In summary, then, the "clear and reasonable" warning required by Proposition 65 is not particularly informative to consumers.

While the Proposition 65 warning does not provide much detail, the underlying goal of the law may not really be to communicate detailed hazard information to consumers. David Roe, one of the early supporters and authors of the law, notes that the ideal number of labels is no labels.[12] Proposition 65 focuses more on producer behaviour than consumer behaviour. The reality is that most producers would rather change their products than provide the warning. Arguments about what the label should look like – pictograms, font size, colour, placement, etc – could go on forever. The approach taken in California was to avoid this issue by striving to have no labels at all. A key factor in the success of this approach is to only list chemicals that are widely accepted as sufficiently toxic that no company wants to include a hazard label stating that their product contains the chemical.

Concerns have been raised that the ubiquity of Proposition 65 warning labels causes consumers to under-react and ignore the identified hazard. There is debate as to whether, after seeing Proposition 65 warnings at every gas station and restaurant in California, people become desensitized to the warnings. There is no penalty for putting a precautionary label on a product that contains no listed chemicals, rendering the warning potentially meaningless. Further, the required warning may not be strong enough to overcome pre-existing beliefs about the safety of consumer products. For example, even if the label on a kitchen faucet says that the product contains lead, consumers may still believe that the faucet is safe and will not taint their tap water.[13] The problems of over-labelling by producers or under-reaction by consumers should be considered when designing a labelling system, but arguably some level of consumer indifference is likely even with the best designed labels.

Another drawback to Proposition 65 is that it applies only to carcinogens and reproductive toxins. While the model could be extended further to cover other particularly harmful substances such as endocrine

[11] Clifford Rechtschaffen, "Warning Game: Evaluating Warnings under California's Proposition 65" (1996) 23 Ecology LQ 303.
[12] David Roe, telephone conversation, 3 July 2012.
[13] Rechtschaffen, *supra* note 11 at 330.

disruptors and neurotoxins, it is not necessarily well-suited to forming the basis for a comprehensive consumer product labelling regime.

An important factor when considering the use of the Proposition 65 model in Canada is the importance of citizen suits to Proposition 65's effectiveness. Enforcement of laws by private citizens is a fairly common feature of American environmental laws. Though it would not be impossible to draft a Canadian law that included citizen suits, it would be unusual and potentially less readily accepted than in the U.S.[14]

European Union: CLP and REACH

Background

Regulations governing chemical substances in the EU are fairly complex. Below is a general overview of the most important aspects of these regulations, as they relate to consumer product labelling.

The *Regulation on the Classification, Labelling and Packaging of Substances and Mixtures* ("CLP Regulation") sets out labelling requirements for almost all consumer products.[15] The CLP Regulation came into force in 2009 and should be fully implemented by 2015. A primary stated purpose of the CLP Regulation is to ensure a high level of protection of human health and the environment by clearly communicating hazard information to workers and consumers throughout the EU.[16] To this end, it covers not only consumer product labelling but also safety data sheets in the workplace setting.

The CLP Regulation places burdens primarily on "suppliers", a term defined broadly to include manufacturers, importers, downstream users and distributors who place a substance on the market.[17] Suppliers are required to classify and label products in accordance with the CLP Regulation.

The most hazardous substances are subject to "harmonised classification". Harmonised classification means that the decision on how to classify a substance is made by the EU community as a whole. The intent under the CLP Regulation is to apply harmonised classification to substances displaying carcinogenicity, germ cell mutagenicity, reproductive toxicity (collectively, "CMR properties") and

[14] Note that citizen suit provisions are not totally unprecedented in Canada. For example, s. 40 of CEPA has a limited citizen suit provision.
[15] Regulation (EC) No 1272/2008, online: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008R1272:EN:NOT ["CLP Regulation"]; certain products, like medical products, cosmetics, and food products, are not covered by CLP because they are governed by stricter legislation – see CLP Regulation Article 1(5).
[16] CLP Regulation, Article 1(1).
[17] CLP Regulation, Article 2(26).

respiratory sensitization. These health hazards are recognized as particularly serious and are therefore subject to stricter classification. Annex VI to the CLP Regulation sets out classification requirements for these hazardous substances in some detail. For substances subject to harmonised classification, there will often be a specific concentration limit below which the substance may be placed on the market, as well as special instructions regarding entry of that substance on to the market.

With few exceptions, suppliers must label all products containing hazardous substances in accordance with the CLP Regulation. Specific labelling requirements are set out at great length in Annex I to the CLP Regulation. A main feature of the labelling rules is the adoption of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), a set of labelling rules agreed to at the United Nations level. Depending on how the specific hazard is classified, labelling elements under the GHS may include:

- Product identifiers: the name and identification number of the hazardous substance(s); this must be the same identifier as included on the safety data sheet in the workplace, and will often be a Chemical Abstracts Service (CAS) registry number
- Hazard pictograms: specific pictorial representations are assigned to each hazard category
- Signal words: indicate the severity of the hazard. "Danger" connotes a more severe hazard; "Warning" connotes a less severe hazard
- Hazard statements: describe the nature and severity of the hazard (e.g. "Acute toxicity (inhal.), Hazard Category 2", "Carcinogenicity, Hazard Category 1A")
- Precautionary statements: relevant statements giving advice on measures to prevent or minimize potential adverse effects resulting from using the product.[18]

Labels must also include the name, address and telephone number of the supplier, and the nominal quantity of the substance at issue contained in the product. Figure 1 is an example of what a label containing these elements might look like:

[18] For further discussion of these elements, see ECHA, "Introductory Guidance on the CLP Regulation" (2009) at 60-64, online: http://echa.europa.eu/documents/10162/13562/clp_introductory_en.pdf.

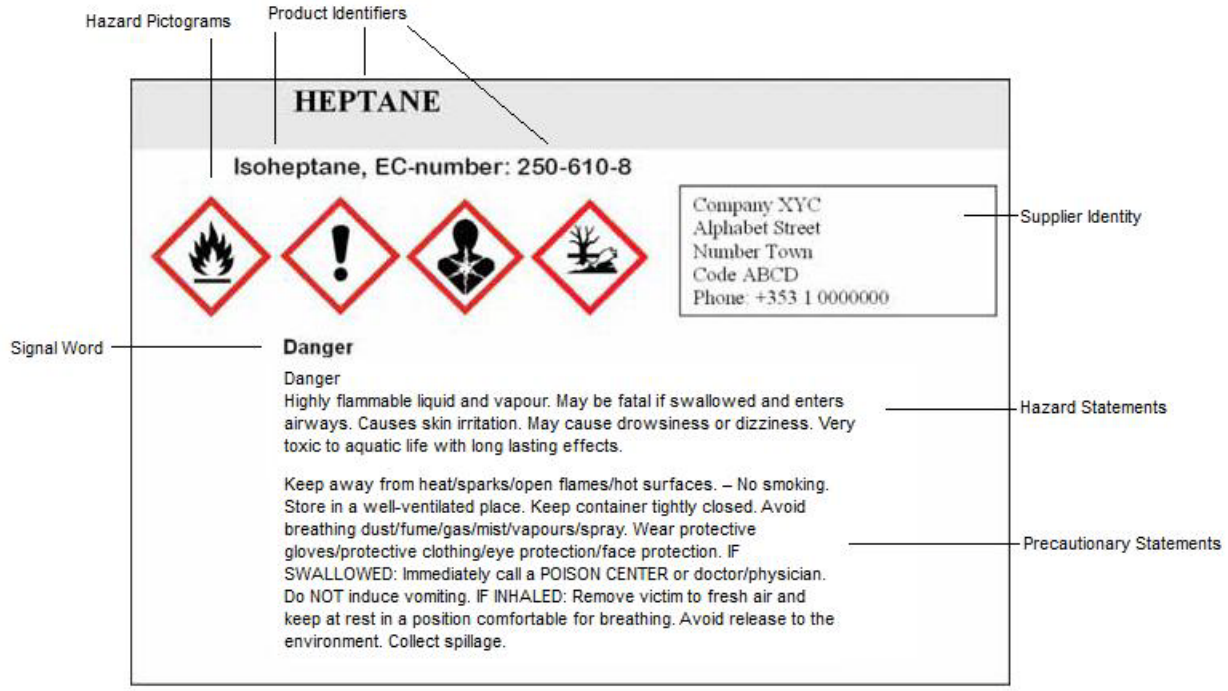

Figure 1: an example of the labelling elements required under the CLP Regulation.[19]

The required size of the label depends on the size of the package.[20] For packages less than 125mL or where it is otherwise difficult to label a package, there are exemptions that allow pictograms or hazard and/or precautionary statements to be omitted from the label.

Labels must be firmly affixed to one or more surfaces of the product. They should be readable horizontally when the package is set down normally. All required labelling elements should be clear and should stand out from the background. Elements of the label should be sufficiently spaced to be easily read, but a particular format for displaying the required information is not prescribed.

The success of the CLP model of labelling depends on effectively identifying hazardous substances. To this end, the Registration, Evaluation, Authorization, and Restriction of Chemical Substances ("REACH") regulation came into force in 2007. REACH is intended to protect human health and the environment by governing the production and use of chemical substances. It applies to all chemical substances and puts

[19]Adopted from ECHA, "Guidance on Labelling and Packaging in accordance with Regulation (EC) No 1272/2008" (2011) at 37, online: http://echa.europa.eu/documents/10162/13562/clp_labelling_en.pdf.
[20]CLP Regulation, Annex I, s 1.2.1.

the burden on companies to collect and assess information about the hazardous properties of substances they are using. Under REACH, the European Chemicals Agency designates substances of very high concern ("SVHCs") to restrict the use of the most hazardous chemicals and encourage substitution. Substances with CMR properties, or substances which are persistent, bioaccumulative and toxic may qualify as SVHCs, with consequences for classification and labelling under the CLP Regulation.

Discussion

The consumer product labelling regime in the EU is a nice example of the implementation of the GHS model. As an internationally agreed upon system, using the GHS may eliminate what can otherwise be endless debate about what symbols and statements to use for different hazard classes (although the GHS does not solve the problem of determining which substances belong to each hazard class and at what concentration they become hazardous).

There are several advantages to following the GHS model. GHS labels apply to a wide range of both acute and chronic hazard classes, including physical hazards, health hazards, and environmental hazards. The use of pictograms, signal words, hazard statements and precautionary statements means that a fair amount of detail is communicated to the consumer at the point of sale. An added benefit of the CLP Regulation is the mandatory supplier contact information added to the label, which potentially gives a curious consumer a place to find more information.

The GHS model is therefore fairly effective in promoting the consumer right-to-know, assuming that hazardous substances are appropriately classified so that a precautionary label is required. Unlike a Proposition 65 label, a label required under the CLP Regulation informs the consumer of the substance at issue, the amount of that substance in the product, the degree of risk posed, and ways to minimize or avoid that risk. The use of pictograms is also helpful for those with lower reading comprehension abilities. Studies show that even consumers who read well benefit from hazard pictograms.[21]

In practice, classification of substances under the CLP Regulation is based primarily on the intrinsic properties of the substance.[22] This is called a "hazard-based" approach, dependent on the intrinsic potential of a substance to cause harm. It can be contrasted with a "risk-based" approach, which considers the likelihood of harm occurring based on a given concentration of the substance. The merits and drawbacks of hazard-based classification are discussed below.

[21] Rechstaffen, *supra* note 11 at 325.
[22] "Hazard v Risk in EU Chemicals Regulation" (2010) 2010 European Journal of Risk Regulation 239 at 242.

Hazard-based labelling under the CLP Regulation may have potentially undesirable consequences. When a substance is determined to display CMR properties and is added to Annex VI of the CLP Regulation, the substance may become a SVHC under REACH and be subject to strict regulation and/or forced substitution. This hazard-based classification takes place without any consideration of the actual risk posed by the presence of the listed substance in the product. Restrictions may be put on relatively safe products, forcing the consumer to lose the benefits of what is actually safe for human use. Moreover, forcing substitutions may result in companies using other chemical substances that are less understood and potentially more harmful to the environment and/or human health.

A key drawback of the European model is its complexity. REACH and the CLP Regulation, which complement each other to regulate chemicals in the EU, took years to pass and will take longer to fully come into force. The process of identifying and regulating hazardous substances has been ongoing for some time and has required significant government resources. Despite this complexity, there is much to be learned from the CLP Regulation in terms of what requirements to place on labelling.

IV. Implementing Hazard Labelling for Consumer Products in Canada

History

As mentioned in the introduction, calls for mandatory consumer product labelling are not new in Canada. For years, a number of health and environmental groups have vocally advocated for the recognition of a consumer right-to-know through product labelling. Some key contacts and resources are listed in Appendix "A". The work done to date is invaluable and these groups will be important allies and resources in future efforts to implement hazard labelling for consumer products.

The work of the Ad hoc Expert Group for Chronic Hazards for Consumer Chemicals forms important context for the movement to promote consumer product labelling laws in Canada. The group was convened by Health Canada between 2005 and 2007, and included representatives of labour (Canadian Labour Congress), industry (Canadian Consumer Specialty Products Association) and non-governmental public interest (Labour Environmental Alliance Society). The primary purpose of the group meetings was to discuss whether consumer chemical products should be classified according to the GHS chronic hazard classes.[23] Unfortunately, deliberations fell apart as stakeholders were unable to agree upon whether a risk-

[23] Carcinogenicity, germ cell mutagenicity, reproductive toxicity, respiratory/skin sensitization, and target organ toxicity (repeated dose).

based or hazard-based approach was appropriate for labelling chronic hazards.[24]

In a risk-based approach to hazard labelling, a substance is first classified as hazardous based on its inherent properties. Next, the likelihood of injury is determined by looking at how a product will actually expose a consumer to the hazardous substance. Labelling will only be required where the exposure under conditions of proposed/foreseeable use of the product is likely to result in harm to the consumer.

In contrast, a hazard-based approach requires labelling where the inherent properties of a substance are deemed to be hazardous. The hazard-based approach therefore goes directly from classification to labelling, without a risk assessment of the likelihood of injury.

A hybrid approach is also possible, in which hazard-based labelling can be supplemented with a risk statement where an exposure threshold exists, indicating the likelihood of harm from the use of the product.

The group agreed that chronic hazard labelling should be considered for consumer products and that a hazard-based approach was appropriate for mutagenic substances. However, no agreement was reached about what approach was appropriate for substances classified as carcinogenic or toxic to reproduction (including developmental toxicity). Labour and the non-governmental public interest sector argued that thresholds for "safe" levels of most substances with CMR properties cannot be determined, necessitating a hazard-based approach. Labour was receptive to a hybrid approach where a risk assessment on a given substance is available and reliable. Non-government public interest maintained that the consumer's right to know requires a firm hazard-based approach, with labelling based on inherent hazards of substances. Conversely, industry was supportive of a risk-based approach and much more optimistic that risk assessments could be accurately completed for a wide range of CMR substances. For industry, the likelihood of harm must be taken into account for a chronic hazard labelling system to be effective and fair. A risk-based approach ensures that labels are not cluttered with unnecessary information because labels are not required where the exposure to a potentially harmful substance is below a threshold determined to be safe.

[24] An excellent, more detailed summary of the outcome of the Ad hoc Expert Group for Chronic Hazards for Consumer Chemicals meetings, including discussion of risk vs hazard based labelling, is available on the CELA website at http://s.cela.ca/files/uploads/ProductLabeling.pdf.

The work of the group did not continue beyond this impasse reached in 2007. Since then, discussions around implementing GHS labelling in Canada seem to be restricted to the workplace context.[25]

Legislation affecting consumer product labelling did undergo reform recently when a review of the *Hazardous Products Act* led to the passing of the *Canada Consumer Product Safety Act* (CCPSA), which came into force in June 2011. In consultations that preceded the introduction of the CCPSA, environmental groups again focused efforts on pushing for mandatory consumer product hazard labelling. But again, the efforts were largely unsuccessful – the CCPSA does not proactively address chronic hazards in consumer products. However, the CCPSA may provide a means to enable further discussions on these issues between Health Canada and stakeholder groups. Section 67(1) of the CCPSA requires that the Minister of Health establish a committee to provide advice on matters including the labelling of consumer products. The David Suzuki Foundation and the Canadian Environmental Law Association recently reminded the Minister of her obligation to form this committee.[26] Given the purpose of the CCPSA to "protect the public by addressing or preventing dangers to human health or safety that are posed by consumer products in Canada, including those that circulate within Canada and those that are imported",[27] a committee to address the issue of chronic hazard labelling should be a priority for government.

Toxic Substances Labelling Act

Another important development in favour of mandatory consumer product hazard labelling in Canada is the *Toxic Substances Labelling Act* (the "Act"). The Act is reproduced as Appendix "B". This draft legislation was developed by some of the leading minds in the right-to-know labelling movement and has been introduced to Parliament by NDP MP Peter Julian on a few occasions, most recently as Bill C-408 in March 2012. The Act represents a simple vehicle to implement consumer product hazard labelling by prohibiting the availability of products containing toxic substances unless a warning label is applied to the product. In this sense it is much like Proposition 65 in that it does not prohibit the use of toxic substances, but rather merely requires that consumers be warned of their presence.

"Product" is defined broadly to include food products, giving the Act the wide scope necessary to adequately protect consumers from exposure to toxins.

---

[25] Under Canada's Economic Action Plan, there is a Regulatory Cooperation Council Occupational Safety Working Group dealing with GHS. See http://actionplan.gc.ca/eng/feature.asp?mode=preview&pageId=444

[26] CELA and the David Suzuki Foundation, July 12, 2012 letter to Leona Aglukkaq, Minister of Health, online: http://www.cela.ca/sites/cela.ca/files/L-Min-Aglukkaq-CCSPA.pdf.

[27] *Canada Consumer Product Safety Act*, SC 2010, c 21, s 3.

"Toxic substance" is defined by incorporating several well-respected lists of hazardous substances, including the Proposition 65 list maintained by OEHHA, the CMR list maintained by the European Chemicals Agency, and carcinogens listed by the International Agency for Research on Cancer (IARC). The government may also prescribe toxic substances not appearing on any of the lists. By using lists compiled by other bodies, the Canadian government would avoid the burden of creating its own list of substances that display CMR properties and other chronic hazards. Moreover, regulating chemicals by referencing the lists of other organizations has been done under other Canadian legislation – the BC Occupational Health and Safety Regulation imports standards from IARC and the American Conference of Governmental Industrial Hygienists to identify workplace hazards.[28] While the lists referenced in the definition of "toxic substance" are comprehensive and would cover a wide array of CMR substances, the definition could probably be simplified to make compliance more manageable for parties regulated by the Act. For instance, Canada could incorporate lists from IARC and the EU, and then maintain its own list of substances found to be toxic under CEPA that may require labelling. A review of the lists listed in the definition of "toxic substance" would likely find substantial overlap, which favours choosing one or two lists to simplify what otherwise looks like an unmanageable definition.

The Act advances a hazard-based approach to consumer product labelling. Products are labelled based on the inherent hazard of their contents regardless of actual risk to consumers.

It is a punishable offence under the Act to fail to label products that contain a toxic substance. Notably absent from the prohibition and punishment provisions in the Act are some key features of Proposition 65, which prohibits anyone from *knowingly* exposing the public to a listed substance. Proposition 65 also offers potential offenders the chance to prove that any exposure to a listed substance is at or below safe harbour levels. While it is important to take a tough stance on labelling the presence of harmful substances in consumer products, the Act may go too far in not allowing a company to prove that the exposure to a listed chemical is in fact safe. As discussed further below, a pure hazard-based approach to labelling may not be a realistic option.

Putting it all together – key features of a Canadian consumer product labelling law

Several key features of an effective Canadian consumer product labelling law can be discerned from the preceding discussion.

[28] *Occupational Health and Safety Regulation*, BC Reg 296/97, Part 5.

First, a federal approach to labelling seems necessary. "Consumer products" cover a wide range of goods, including goods produced in Canada that cross provincial boundaries, and imported goods. While provincial and local governments have a role to play in promoting the community right-to-know in other ways,[29] a consistent approach for product labelling is needed across Canada. While support for mandatory consumer product labelling will be garnered at the grassroots level, the law itself will be federal.

Second, a new piece of legislation, rather than an amendment to an existing law, is likely needed. The range of federal acts dealing with hazardous substances was canvassed briefly above. But even regulations under CCPSA would be inappropriate because of its limited scope.[30] A law that effectively informs consumers of toxins in the range of products available to consumers must cast a wide net to capture the broadest spectrum of consumer products possible.

Beyond the need for new federal legislation to address the issue of consumer product hazard labelling, the precise form of consumer product labelling legislation will vary depending on goals and political will.

A central consideration when deciding upon the appropriate legal vehicle to advance consumer product labelling is whether to use a hazard- or risk-based approach. This is the question that killed the Health Canada consultations about consumer chronic hazard labelling in 2007.

A helpful way to reframe this debate is to recommend a strong precautionary approach, which ends up being a hybrid approach biased towards hazard-based labelling. A precautionary approach would ideally strike the perfect balance between informing consumers of the presence of hazardous substances, while remaining attuned to the reality that some substances are in fact safe at low enough concentrations even though they are toxic at higher doses.

In my view, a precautionary approach to hazard labelling should begin with an assessment of the inherent properties of a substance – hazard-based classification must be the presumptive starting point. Labelling decisions should err on the side of over-labelling, not under-labelling. However, as our knowledge and understanding of toxic substances evolves, a substance may be known to be safe below a certain threshold. Determining when the concentration of a hazardous substance is "safe" enough to justify a risk-based approach to labelling raises a difficult policy question. The process for establishing safe harbour

[29] See for example CELA, "Creating Community Right-to-Know Opportunities in the City of Toronto" (2006), online: http://s.cela.ca/files/uploads/538_rttknow.pdf.
[30] The CCPSA does not apply to items listed in s. 4 and Schedule 1, most notably food products.

levels in California is one example of how to approach the issue. The presumption in favour of hazard-based labelling should be reasonably difficult to rebut. But where it can be established with relative certainty that the presence of a hazardous substance in a given product poses no risk, mandatory labelling legislation should allow the precautionary hazard labelling requirement to be waived.

One idea for a labelling system that balances the consumer right-to-know against unfairly imposing hazard labels on products that are not hazardous is a tiered approach to labelling. For the majority of substances, where no accurate risk assessment is possible, hazard-based labelling would apply. When a risk assessment is possible and the substance is determined to be "safe" below a certain concentration, a more subtle ingredient disclosure label could be required that does not require a full-fledged hazard label with pictograms and hazard statements. An ingredient disclosure label would disclose the chemical contents of a product but would not include warnings or labelling elements meant to attract attention. It would be required anytime a listed substance is present in a product below established *de minimis* levels, clearly identifying the presence of a listed substance. This approach could avoid unnecessary hazard labels while still giving conscientious consumers the ability to avoid products based on their own risk tolerance.

There is much to be learned from California's Proposition 65. One of its strengths is its simplicity, requiring a warning label on products that will expose consumers to listed substances. It is critical that the state may list substances without performing a risk assessment to determine at what exposure a substance becomes harmful, meaning that labelling requirements can be purely hazard-based. However, the OEHHA may set "safe harbour" levels for listed substances, below which labelling is not necessary. This is a practical approach, since in the real world it may be considered unfair to put a hazard label on something that is not hazardous. Of course, the big question remains how much scientific proof is needed to confidently draw the line of when a substance is or is not harmful. A comprehensive risk assessment must be able to accurately predict the potential impact of the substance over its entire life cycle, including possible cumulative and synergistic effects of exposure to the substance.

A key drawback of Proposition 65 is that the required labels do not necessarily convey meaningful information to the consumer. At the point of sale, consumers must be informed that the product may contain a substance know to the state to cause cancer or reproductive toxicity, but no other information is required. A Canadian law designed to promote a consumer right-to-know should strive to convey more information than the Californian labels. Luckily, the EU CLP Regulation serves as a useful example of how to legislate requirements for a more detailed product label. As a set of standards agreed to at the UN

level, there is certainly a strong argument to be made in favour of using the GHS model for consumer product labelling in Canada. Otherwise, debate over what information should be presented on product labels, and how it should be presented, could go on forever. With the GHS, the standard included elements communicate a fair amount of information to the consumer, including a pictogram, information about the nature and severity of the risk, and instruction on how to mitigate or avoid the risk.

All things considered, the *Toxic Substances Labelling Act* is a good starting point. A few critiques of the Act were offered above. In particular, the definition of "toxic substance" may be unwieldy and could probably be simplified. Further, the strict hazard-based approach to labelling and the associated penalties may be unfair in situations where safe exposure levels can be accurately assessed. Though it would add to the complexity of the Act, the labelling requirements could be expanded to capture the precautionary approach described above. Products containing toxic substances would be subject to labelling requirements similar to those set out in the GHS and the CLP Regulation. The ability to prove an inherently hazardous substance safe below a certain threshold could be added to the Act. But the mandatory labelling rules should apply even if government does not set these safe levels. Where a toxic substance is included in a product below an established safe threshold, the product would be exempt from the hazard label requirement, but an ingredient disclosure label noting the presence of a hazardous substance could still be required. This approach would distinguish the really dangerous from the nominally dangerous but still promote the ability of conscientious consumers to choose their own level of risk.

Conclusion

Canadian consumers are left vulnerable by a lack of legislation requiring the disclosure of chronic hazards in consumer products. As stories about poisonous baby bottles and flame retardants in human breast milk grab headlines,[31] the importance of chronic hazard labelling has never been clearer. While efforts to promote mandatory consumer product labelling laws have come up against strong opposition in the past, the time is now to push for these laws and establish the consumer right-to-know in Canada.

New laws are needed at the federal level to advance the mandatory labelling of toxins in consumer products. Such legislation should meet the following criteria:

- A law to address chronic hazards must take a precautionary approach.

[31] Environmental Working Group, "EWG's Guide to Infant Formula and Baby Bottles: BPA in baby bottles", online: http://www.ewg.org/node/25572; Sonya Lunder et al, "Toxic Fire Retardants (PBDEs) in Human Breast Milk" (September 2003), online: http://www.ewg.org/reports/mothersmilk.

- Labels should convey meaningful information to the consumer. The EU implementation of the GHS serves as a useful example.
- A hazard-based approach to labelling, where labels are required based on the inherently hazardous properties of substances, must be the presumptive starting point. However, there should arguably be a way of exempting products where scientific knowledge is sufficient to determine that the presence of a hazardous substance in the product poses very low risk. Allowing a risk-based approach to labelling in limited circumstances ensures that hazard labels retain some meaning by distinguishing the really dangerous from the nominally dangerous. Proposition 65's "safe harbour" levels offer one way to accomplish this goal.
- Where a product containing a hazardous substance is exempt from hazard labelling, a more subtle ingredient disclosure label could still be required to promote the consumer right-to-know.
- Learning from the Californian approach, a successful labelling regime should avoid getting caught up in endless scientific debate. Beyond setting criteria for how safe exposure levels to substances can be established, it should be left to those wishing to use hazardous substances to prove that a given substance is safe below a certain concentration.
- Efforts to promote mandatory hazard labelling of consumer products must build on the work done on this issue to date. For this reason, the *Toxic Substances Labelling Act* serves as an appropriate starting point as a legal model to move this important initiative forward.

Appendix "A" – Contacts

The following parties were consulted in the preparation of this paper and could be important resources:

Name	Organization/Description	Contact
Mae Burrows	Toxic Free Canada – Mae has been the voice of the consumer product labelling movement in Canada and will be a key resource for renewed efforts to promote this cause	mburrows@telus.net
Kathleen Cooper	Canadian Environmental Law Association – Kathleen and other CELA staff	kcooper@cela.ca
David Boyd	David Suzuki Foundation – David is an environmental expert who has written about the threats posed by toxins in *Dodging the Toxic Bullet*	drboyd@uvic.ca
David Roe	N/A – David drafted California's Proposition 65 and is very knowledgeable about the tough policy questions underlying labelling legislation	davidroe@mail.com
Peter Julian	New Democratic Party – Peter has introduced the *Toxic Substances Labelling Act* to Parliament as a private member's bill on several occasions	juliap9@parl.gc.ca

Other resources:

- CELA - http://www.cela.ca/collections/pollution
- Ecojustice - http://www.ecojustice.ca/
- Pollution Probe - http://www.pollutionprobe.org/ (See the recently published primer on Toxic Substances)

Appendix "B" – Bill C-408: *Toxic Substances Labelling Act*

Introduced for First Reading by MP Peter Julian on March 14, 2012

An Act to ensure that warning labels are affixed to products containing toxic substances

Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

SHORT TITLE

Short title

1. This Act may be cited as the *Toxic Substances Labelling Act*.

INTERPRETATION

Definitions

2. The following definitions apply in this Act.

"food"

"food" means food as defined in section 2 of the *Food and Drugs Act*.

"product"

"product" means a good that can be produced, bought or sold, and that has a physical identity, including food and agricultural products.

"toxic substance"

"toxic substance" includes any of the following substances in a gaseous, liquid or solid state:

(*a*) substances identified as Group 1, Group 2A or Group 2B agents in the IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, published by the International Agency for Research on Cancer;
(*b*) substances identified as carcinogenic, mutagenic or toxic to development or reproduction by
(i) the European Chemicals Agency,
(ii) any directive or regulation of the European Parliament and Council of the European Union,
(iii) the Office of Environmental Health Hazard Assessment of the California Environmental Protection Agency,
(iv) the United States National Toxicology Program's list of known or reasonably anticipated carcinogens,
(v) the United States Environmental Protection Agency, or
(vi) the Department of Health or the Department of the Environment;
(*c*) substances classified as endocrine disrupting chemicals by
(i) the European Chemicals Agency,
(ii) any directive or regulation of the European Parliament and Council of the European Union, or
(iii) the United States Environmental Protection Agency, the Department of Health or the Department of the Environment;
(*d*) substances included in the list of chemicals known to the State to cause cancer or reproductive toxicity, published annually by the Governor of California pursuant to the *Safe Drinking Water and Toxic Enforcement Act of 1986*; and
(*e*) any other substance that is prescribed as a toxic substance in the regulations.

PROHIBITION

Prohibition

3. (1) It is prohibited for anyone to sell, import or advertise any product that contains a toxic substance or produces a toxic substance when used, unless that product has applied to it a warning label on one or more surfaces of its packaging.

Warning label

(2) The warning label required under subsection (1) must be printed in clearly legible and indelible characters and must include

(*a*) a list of every toxic substance that product contains;

(*b*) a description of the risks involved in the use of each toxic substance in the product;

(*c*) a hazard symbol indicating the nature of the hazard of each toxic substance; and

(*d*) an indication of the product's origin, including the name and address of its manufacturer or distributor.

REGULATIONS

Regulations

4. The Minister of Health may make regulations for carrying into effect the purposes and provisions of this Act and, in particular, may make regulations

(*a*) declaring that any product is toxic or contains a toxic substance;

(*b*) respecting the labelling of the products described in subsection 3(1);

(*c*) respecting the importation of products manufactured outside of Canada in order to ensure compliance with this Act and the regulations;

(*d*) requiring persons who sell products to maintain such books and records as the Minister considers necessary for the proper enforcement and administration of this Act and the regulations;

(*e*) requiring manufacturers of any product to submit test portions of any batch of their product;

(*f*) providing for sampling, testing, inspection and analysis of products, providing for the manner and conditions of sampling, testing and analysis and designating laboratories to perform testing and analysis; and

(*g*) providing for the review of the definition "toxic substance".

OFFENCES AND PUNISHMENT

Contravention — goods

5. (1) Every person who contravenes any provision of this Act or the regulations as that provision relates to a good other than food is guilty of an offence and liable

(*a*) on summary conviction, to a fine not exceeding $5,000; or

(*b*) on conviction on indictment, to a fine not exceeding $10,000 or to imprisonment for a term not exceeding six months, or to both.

Contravention — foods

(2) Every person who contravenes any provision of this Act or the regulations as that provision relates to food, is guilty of an offence and liable

(*a*) on summary conviction, to a fine not exceeding $50,000 or to imprisonment for a term not exceeding six months, or to both; or

(*b*) on conviction on indictment, to a fine not exceeding $250,000 or to imprisonment for a term not exceeding two years, or to both.

Criminal liability of officers, etc., of corporations

(3) Where a corporation commits an offence under this Act or the regulations, any officer, director or agent of the corporation who directed, authorized, assented to, acquiesced in or participated in the commission of the offence is a party to and guilty of the offence and is liable on conviction to the punishment provided for the offence, whether or not the corporation has been prosecuted or convicted.

Products received or in transit before Act in force

(4) A person must not be convicted of an offence under this Act or the regulations in relation to the sale, importation or advertising of a product if the person establishes to the satisfaction of the court that the product in relation to which the offence was committed was received by, or was in transit to, the person from a supplier before the coming into force of this Act.