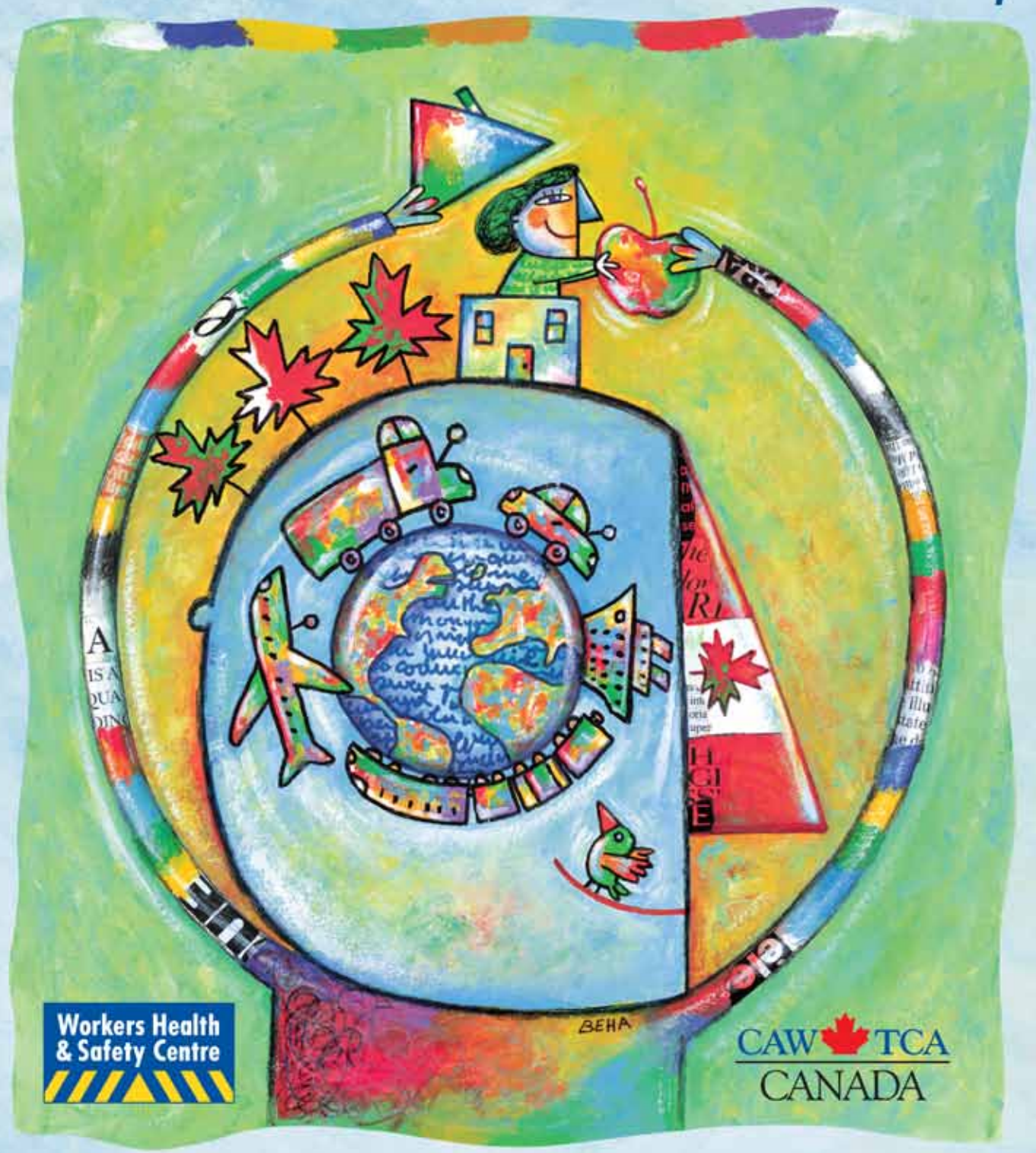
Close to home We are what we buy



Workers Health & Safety Centre

CAW TCA CANADA

Between the cover

Some 40 per cent of all trees cut down are used to create paper. And since 1937, about half of the Earth's forests have been sacrificed to the paper pursuit. Inside pages for this booklet were produced by unionized workers at the Cascade paper mill in Saint Jerome, Quebec. The paper, known as *Rolland Enviro 100*, is made from 100 per cent recycled, post-consumer waste. No harmful chlorine was used to bleach this paper stock. Better yet, the mill making it is powered with biogas piped from a nearby landfill. So this booklet itself is another example of what we call "Green Jobs" — jobs that are safer and healthier for workers, their families, their communities and you.

Close to home

We are what we buy

It's no wonder your food just sits there on your plate, it's travelled a long way! The food in an average North American meal travels about 2,400 kilometers from where it was grown or raised to where it is eaten. While we often count calories, rarely do we add up the environmental impacts of the things we consume.

Along with food, items we use every day from clothing to favourite electronic gadgets require materials, energy and human labour to produce, transport and dispose of them. The end result might be a sweet new pair of running shoes, but their production also includes greenhouse gases which are produced when **fossil fuels** are burned to power factories or trucks which haul those goods across country. When consumer goods are produced overseas then imported here by tankers and aircraft, the greenhouse gas emissions are even greater.

Global trade is indeed driving down the price of many goods. However, when you factor in the hidden environmental costs and the threats to workers' health created by unsafe working conditions, these items are no bargain at all.

Increasing greenhouse gas emissions is a major contributor to global climate change. We are witnessing this firsthand through rising sea levels, increased frequency of droughts, heat waves and severe storms. More than 1.5 billion people in developing countries will experience water shortages. Agricultural yields in some African countries will drop by 50 per cent. Some 20 to 30 per cent of the earth's plant and animal species are threatened too.

Closer to home, Canada's Arctic region is the most dramatically affected by climate change. Warmer temperatures create more open water in winter. Some researchers project there will be regular commercial shipping in the Northwest Passage in another five to 10 years.

Changes to the Arctic, such as increasingly open waters in winter and intense storms, are creating a maritime climate similar to that of the Pacific and Atlantic coasts.

The Arctic has always been an important carbon sink. Now, shrinking sea ice and melting snow is raising sea levels and releasing stored carbon. Reduced snow and ice coverage means less sunlight is reflected and more heat is absorbed into the earth's surface. Walrus and seal populations are in decline as a result. Shoreline erosion puts remote northern communities at risk raising the fear they may have to move inshore to survive.

Individual Canadians like us are concerned about the environment too. Those recently polled in a survey said the environment was the most pressing problem facing the world today. They also said the environment was the number one issue in which Canada had failed to make a positive contribution. Canadians want to see more action taken to protect the environment and they want to be part of the action.

As the old saying goes, 'charity begins at home'. What greater cause is there than the preservation of our Earth? Many others are seeking solutions close to home too. The New Oxford American Dictionary introduced the word locavore. The word was coined by a group of San Francisco women who challenged local residents to eat only food grown or produced within a 100-mile radius. The 'locavore' movement encourages consumers to grow or pick their own food, to source local produce and take advantage of seasonal offerings to prepare food without the need for extra preservatives.

In becoming locavores and looking for local solutions we're also doing a lot to reduce the demands on our overtaxed Earth and on our fellow citizens around the world. As individuals, industries and communities there is much we can do now. This booklet shares many of those solutions. But if you, your friends and family put your minds to it we are sure you could suggest many more. Let's begin though by taking a look at what we are up against.

BIG PICTURE PROBLEMS

Our health is not for sale

Everyone knows the old saying, "you are what you eat." But are we also becoming what we buy?

It's easy for us to think about pollution as something belched out by a factory with no direct connection to us. But we forget that many of those industries are making consumer products we buy.

These products require a lot of energy and often a lot of chemicals. Cars, paper, textiles, electronics, building materials, food and yes, even medicine contains some form of chemicals. The global production of chemicals increased 400 per cent from 1930 to 2000. And yet less than 15 per cent of chemicals in use have been tested to determine their toxicity to humans or their ability to cause environmental damage. In Canada there are tens of thousands of chemicals in use, about 23,000 of these are being tested for their toxic properties, a process that will take years to complete.

Chemical regulation in Canada remains weak and often unenforced. As a result workers in many industries continue to develop diseases like cancer. Firefighters have a heightened risk too and often have to fight fires not knowing what chemicals they're exposed to. Professional firefighters have fought for and won legislation in six provinces to ensure they receive just compensation when they suffer a work-related cancer. Now, they have joined environmental groups in calling for a ban on polybrominated diphenyl ethers (PBDE) a toxic flame retardant often used in household items like TV's, sofas and mattresses. Flame retardants tend to persist in the environment and in our bodies causing damage to neurological, reproductive, immune and hormonal systems.

Many pollutants are released by industries that produce energy and raw materials such as radioactive waste from nuclear plants, emissions from waste incinerators and byproducts from mining and smelting. Other chemicals are intentionally released into the environment to perform a specific task such as pesticides and herbicides used in farming and de-icing agents used on roads during winter.

Some of our **toxic exposures** occur in our own homes. Commonly used items such as perfumes, shampoos, air fresheners, cleaning products and frying pans with non-stick coatings all contain harmful chemicals that can be emitted or ingested.

Regardless of its source, pollution knows no boundaries and can end up in our soil, air, food, water and in our bodies. In

their report, *Toxic Nation: A Report on Pollution in Canadian Families*, Environmental Defence found almost four-dozen chemicals in the blood and urine of selected families tested in British Columbia, Ontario, Quebec and New Brunswick. Health Canada has since announced it will examine 5,000 Canadians to measure obesity and lung function and for the first time they will also measure toxic chemicals in the blood like lead, mercury and pesticides. A similar study in the U.S. found high levels of lead in the blood of those tested. The results helped bring about the elimination of lead in gasoline.

New health threats are in the news every day. Health Canada has recalled a number of contaminated Chinese imported goods ranging from pet food and toothpaste to children's toys. Environmental groups are now pressing for a ban on the use of Bisphenol A, a dangerous hormone disrupting chemical used in many plastics and which has been found to leach into baby bottles.

Canadians already fear the environment is having an impact. One in four Canadians surveyed by the Canadian Medical Association believes they have an environmentally related health problem such as asthma or allergies. Since the late 1980's the cancer rate among Canadians has increased by 50 per cent, asthma among children has increased six fold in a generation and learning disabilities and behavioural problems are also on the rise.

Consumption

If everyone on this planet were to live as we do in Canada it would take five Earths to sustain us, but we have just one and it is being pushed to its limits. Presently, the world's population is over seven billion and expected to reach over nine billion by 2050. Most of this growth is in Asia and Africa. That means a lot more people to feed, clothe and house.

Trends also reveal that more of the world's population lives in urban settings. But unlike our comfortable homes here in North America, one billion of the world's three billion urban dwellers, live in slums, where residents lack access to clean water and secure housing.

Equally concerning and yet not surprising, just 20 per cent of the world's population consumes 80 per cent of the world's material resources and owns over 80 per cent of its wealth. As demands upon the Earth continue to grow we can no longer deny that we are taking more than our fair share of resources and in doing so are contributing to global climate change. The burning of fossil fuels, the massive amounts of resources and energy used to make the stuff of our everyday lives is harming our environment and our health.

Living in a privileged industrial nation with a high standard of living allows us to buy a lot of things every year, some of it we need and some of it we simply want because it's fashionable or trendy. **Consumerism** would have us believe that we will be happier the more we buy. It's not surprising when we're bombarded by ads that sell us stuff 24-hours a day. By the time a student leaves high school they will have watched on average 350,000 television commercials, mostly intended to sell us something.

But do we really need another pair of running shoes when we already have several? Do we have to buy a new outfit for the school dance or can we mix and match something from our closets or borrow something from a friend? Do we need to buy the latest version of our favourite video game?

Statistics Canada tells us Canadian households spent $71,120 on goods and services in 2009. A major portion of those expenses are for taxes and housing, things we can't avoid, but where else did our money go? Spending on cell phones rose 13 per cent. Seventy-seven per cent of households now own at least one cell phone. And one in 10 households own three or more cell phones. We are spending less in some areas though. Canadians spend less on reading materials but more for home internet access.

Shopping sprees are now much easier because we don't have to head to the mall; we can shop from home, either through television shopping channels or through the internet. With a few clicks of our computer mouse, we can purchase clothes, movie tickets and place our weekly grocery order online.

We're big consumers in other areas too. As a nation we are energy hogs. Canadians are second only to Americans in energy use. Our energy consumption has increased one per cent every year for the last 20 years. And that's only our personal use, that doesn't account for the energy needed to make the things we eat and wear every day.

To consume less we need to buy less. That's something everyone can do starting right now. **Buy Nothing Day** is an informal, international movement begun in Europe to encourage dialogue among consumers and to say no to the temptations of our consumer driven society. In Canada and the U.S. Buy Nothing Day is marked on the fourth Thursday in November (the day after the annual U.S. Thanksgiving shopping spree). Mark your calendars and plan to leave your wallets at home.

Globalization

We are a world of different nations, cultures and traditions but we all share one Earth. Recent advances in telecommunications now allow us to leap across time zones and national boundaries. They make the song, "It's a small world after all" have even greater meaning than Disney intended.

Other factors are creating connections among nations too. Canada's international trade increased more since 1990 than it had in the previous 100 years. This is largely the result of freer trade among nations which has eased the flow of goods and services across national and international borders.

Today, Canada exports half of what we produce and we import half of what we consume. In 2002 exports accounted for 50 per cent of all industrial greenhouse gas emissions in Canada. More international trade also means there are more tankers loaded with goods travelling our oceans and seas. Those ships are normally fuelled by **bunker oil**, which is inexpensive but a very dirty type of fuel. Commercial, ocean going vessels produce more sulphur dioxide than all the cars, trucks and buses on the planet.

We are fortunate to live in a resource rich country. It's no wonder one of Canada's most wealthy exports is energy. Our energy exports have quadrupled in the last 25 years. However as our exports rise so do our greenhouse gas emissions since the production of energy, especially oil and gas, is a major contributor to greenhouse gases.

Our exported natural resources are used by other countries to manufacture high-end or value added goods like vehicles and electronics. Trade agreements and cheaper labour costs overseas drives down prices further. That makes it really tempting for us to buy even more, because after all, who doesn't like a bargain.

Taking a closer look though, along with our natural resources many good manufacturing jobs are also being shipped elsewhere. Today, most new jobs are created in the retail and service sectors of the economy, industries where work is more likely to be part-time and less secure.

In the last decade alone, more than 250,000 manufacturing jobs have been lost in Canada, largely because companies have shut down their plants and moved to other countries where environmental and health and safety laws are less strict.

Canada and U.S. signed the North American Free Trade Agreement (NAFTA) in 1988. While it might have reduced the cost of some consumer items, it's had other effects too. A recent poll of some Canadian corporate leaders found they reduced their workforces by almost 20 per cent while their profits rose 127 per cent over the last 20 years.

It's brought about other changes too. Many of these trade agreements like NAFTA now give corporations new and extensive powers almost as if they were countries themselves. This allows them to sue a government whose actions, like

passing laws, might harm their corporate investments. For instance in a handful of "investor-to-state" NAFTA disputes corporations have challenged Canadian government regulations, intended to protect the environment and natural resources, by claiming these laws hinder their efforts to operate and make a profit. To date, the corporations have been winning.

These trade agreements also force countries to aggressively compete to attract business. As a result countries are more likely to weaken regulations to appear more attractive to foreign investors. Poorer countries also tend to suffer more under these agreements. In the last 20 years developing countries which represent one-fifth of the world's population have seen their share of world trade cut in half. As a result, the world's poor are getting poorer.

Let's not forget, while we elect officials to govern our countries, we don't elect the boards of directors of powerful corporations. But as individuals we can however still have some influence. We can act with our wallets and refuse to buy products from corporations which would force the Canadian government to lessen environmental and health and safety standards. If money makes the world go around, then the buck can stop with us.

Waste Management

Consumer goods come from the Earth's resources and return to the Earth most often as garbage and toxic waste. The more we buy the more waste we have to dispose of, either from product packaging or by disposing of items when they stop working or because we decide we no longer want them. We're too quick to buy new, instead of repairing something old. We think too much about our next purchase and not enough about the impact of the one we're ditching.

Canadians discard 30 million tonnes of waste each year, second only to the U.S. When you consider we have one-eighth their population, we appear even more wasteful.

Even now, some 20 years after blue box recycling programs were introduced only about 50 per cent of our waste is being recycled.

Consider plastic water bottles. Recent reports show that three of every 10 Canadians say they drink bottled water some of the time even though they had access to a safe, municipal or private water supply. Some water bottlers have admitted to simply treating municipal tap water and selling it back to consumers. Since homeowners pay for their local water supply, many of us are paying twice for the same water. But what's more worrying still is this: there is more water used in the production of each plastic water bottle than can be held by each finished bottle!

Many of our landfills, especially in large cities, are so overloaded local governments are shipping garbage to other areas or across the border to the U.S. How would you feel if your town became someone else's waste dump!

Because of our massive waste disposal dilemma, more cities are considering **incineration** as an option. Landfills bury the evidence of our wasteful lives, incinerators burn it. An incinerator is a furnace for burning waste. This method can reduce the volume of waste but at a cost. Incinerators, despite the best technological advances, still produce more cadmium, mercury and greenhouse gases per unit of electricity than natural gas or coal. Moreover, the toxic ash produced must be disposed of at a hazardous waste landfill. While incinerators can generate heat which can be converted to electricity, the costs to fund and operate these systems make them more expensive than traditional landfills. Recycling is still a far more efficient method of recovering energy from our waste.

Perhaps the greatest concern with incineration is its toxic emissions which can cause

serious health problems like cancer, respiratory disease, disruption of the endocrine system and congenital birth defects. Emissions can contaminate plant and animal species for great distances, spreading the damage across our whole eco-system.

HOME GROWN SOLUTIONS

People power

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.

— **Margaret Mead**,
U.S. Anthropologist (1901 - 1978)

As problems go, global warming and other environmental threats seem like…..a global problem. It's bigger than all of us. But don't let that stop you from doing your part. There are many things we can do as individuals to make a difference.

Every action counts. It can be as simple as reading labels more often to find out where things are made. Before you buy something ask questions. Talk to your parents. Check out a company's web site, call their toll-free number and find out what their products are made of and how they dispose of their waste materials.

When more people come together possibilities expand again. For instance, the CAW represents more than 200,000 working people in Canada. Their workplace experience gives them a unique perspective on the world. In their other roles as parents and citizens they have even more at stake in finding ways to sustain their families and communities. CAW members as individuals and as a whole, have spearheaded numerous campaigns intended to secure healthier workplaces and communities. Some of these campaigns aim to prevent cancer, clean up rivers and lakes and ban asbestos, to name just a few.

If all of us joined together, then you're talking big time solutions. An Angus Reid Poll found 73 per cent of Canadians consider global warming a serious threat. Two-thirds of Canadians polled said they supported domestic action over international action to battle climate change.

If a majority of us want action on climate change and other environmental problems we need to tell more than the survey takers, we need to tell our elected politicians. Sometimes we forget that the **government is accountable to us**. You and your parents elect politicians to speak and act on our behalf. Sometimes we hear news reports which say governments failed to take action for lack of political will. Whose will, theirs or ours? If you're not able to vote yet you can still make your voice heard. You can start by contacting your local, provincial or federal politicians and tell them your number one concern is the environment. Then ask them what action they will take.

Governments are also elected to spend our tax dollars which amount to billions of dollars each year. The federal government (excluding Crown corporations) is the single largest public sector purchaser in Canada with annual spending of over $13 billion on products and services. As such, governments are big time purchasers capable of influencing how others buy too. Government purchasing practices have an impact on the national economy and the goods and services that are made available in the marketplace.

Our governments should commit to buying locally produced goods which are the most environmentally friendly and the safest possible for the workers who make them and the public servants who use them.

Governments have significant other powers to help bring about change. They can:

- ▷ Negotiate caps on imports and invest in sustainable Canadian industries
- ▷ Fund clean technologies and offer incentives to businesses to create sustainable jobs
- ▷ Regulate levels of toxic emissions and make industry replace dangerous chemicals with safe alternatives
- ▷ Promote and fund green, renewable energy sources
- ▷ Establish 'Buy Canadian' and environmentally friendly content rules for government purchasing.

Remember, it's our tax dollars at work! We have Canadian content rules for broadcasting why not apply those to what our governments buy.

- ▷ Amend the constitution to recognize the rights of citizens to enjoy a clean and healthy environment. Canada would join some 50 other countries that've already made the commitment
- ▷ Set up an international fund to help poorer countries develop green energy, products and services.

Fair Trade

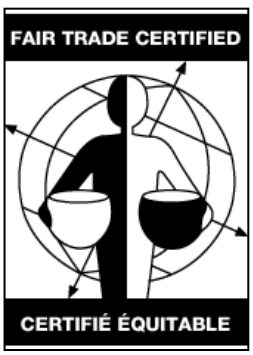
Canadians enjoy one of the highest standards of living in the world. Yet many nations still struggle to feed, clothe and house their citizens. The world's poorest nations are also most likely to suffer the worst environmental impacts of global warming.

Long before concerns about climate change and globalization were commonly debated many social and environmental organizations were already looking to address issues of hunger, poverty and the increasing gap between rich and poor nations.

One of these solutions is fair trade. Fair trade is a form of international trade which promotes paying a fair, minimum price for goods. But just as important is its promotion of **social, environmental and health and safety standards** for workers and producers. It's a system whose end result aims to lift workers, producers and whole communities out of poverty to greater economic security and self-sufficiency.

Let's look at an example. We all love chocolate but we can't grow cocoa plants here. Cocoa grows best in tropical climates like in Africa. Did you know that 90 per cent of the world's cocoa is grown on small family farms of 12 acres or less? According to the European Fair Trade Association cocoa farmers receive only about five per cent of the profits; the vast majority of the profit goes to trading associations and the chocolate industry. Farmers, especially in poorer countries, have little or no input into the price of their crops. Therefore the cost of production is often more than the price they receive for their crops forcing farmers into poverty if not off their land altogether.

Goods produced and traded according to fair trade principles try to ensure the following: workers are provided fair wages and safe and healthy working environments; producers earn a fair price for their goods; and methods of production are sustainable. These items carry a fair trade label. If you live in a larger city you can readily find fair trade chocolate, coffee and tea products in your grocery store. If not, ask the store manager to start stocking them.



Also remember, by purchasing fair trade items, when it comes to jobs, we help ensure developing nations don't end up undercutting developed nations like Canada. When workers everywhere are treated fairly the so called competitive advantage of low wages and poor workplace standards is eliminated.

Every year, the second Saturday in May is celebrated around the world as **World Fair Trade Day**. Fair trade helps lift workers, many of them children, out of poverty and hazardous jobs and helps place them into schools where they belong. The International Labour Organization tells us 218 million children between the ages of five and 17 are working, often in dangerous conditions.

This past February more than 800 Manitobans through their schools, churches, labour and community groups took the One-Month Challenge and agreed to drink only fair trade coffee, tea and eat only fair trade chocolate for 30 days. Of course they still ate their veggies and fruit! Their purchases help support more than two million

workers and farmers, their families and communities, in more than 57 countries.

If you're an admitted chocoholic, here's a way to ease your guilt and put those chocolate bars to good use. Two pioneering young British men, Andy Pag and John Grimshaw, travelled from the southern coast of England to Timbuktu by truck. But it's not just any truck. The 7,200 kilometre journey was fuelled by biodiesel made from 4,000 kilograms of chocolate, the equivalent of 80,000 chocolate bars. A British firm, Ecotec, used 5,000 tonnes of discarded material from a chocolate factory, turned it into bio-ethanol and mixed it with vegetable oil to produce biodiesel. These two adventurers also left behind a small processing unit to allow local residents to convert waste cooking oil into fuel while helping to supplement their income. Follow their efforts at **www.biotruck.co.uk**.

Sustainability

> *"Sustainability is an economic state where the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations. It can also be expressed in the simple terms of an economic golden rule for the restorative economy: leave the world better than you found it, take no more than you need, try not to harm life of the environment, make amends if you do."*
>
> — **Paul Hawken**,
> The Ecology of Commerce

It's pretty exciting to learn about other planets through space shuttles flights and satellites. But for now, we have only one planet we can call home. That's why we need to tread a little more lightly on it if we want our children and grandchildren, our sea turtles and polar bears to call it home too.

Living sustainably sounds complicated but it's a concept that simply means meeting your needs without compromising the ability of future generations to meet their own needs.

There are many ways to move towards this kind of society in a way that reduces the impact on the environment and to workers. Consuming sustainably considers how we choose, use and dispose of products and services in a way that conserves energy and materials, minimizes the depletion of natural resources, avoids toxic substances and enhances the quality of life of both consumers and workers throughout the life cycle of the product or service.

We can borrow a guiding workplace health and safety principle which says this: when you control a hazard do so in a way that doesn't create another new hazard. For instance, installing ventilation to protect workers from a chemical is a good thing, but not if it's vented to another area where other workers can be exposed. (Of course, a better thing would be to eliminate the chemical from production altogether.)

The same principle can be applied to sustainable practices. Let's consider biofuels which until recently were promoted as a very sustainable form of alternative energy. **Biomass** is the name scientists give to the energy stored in plants like wood, straw, grass and corn. Biomass can be burned to produce electricity, digested by bacteria to produce biogas and biodiesel, or processed to make ethanol or alcohol fuel.

The increasing price and enormous amount of energy needed for fossil fuel production have led to a massive investment into alternative low-carbon biofuels. Targets set by some governments to guarantee a certain amount of energy comes from renewable energy forms, has also fuelled interest in biofuels.

Not surprising the biofuel demand led farmers around the world to grow more corn, not for eating but for use in ethanol production. Crops once destined for our plates are now going into our fuel tanks. The demand has pushed up the price of corn which in turn has increased the cost of many food basics.

Experts warn these actions will lead to more hunger in poor countries.

But the mad dash to plant biofuel crops has seen lands cleared of forests, peatlands and grassland, which are nature's method of storing carbon. If unearthed, these carbon reservoirs will further add to global greenhouse gas emissions. Several studies have concluded that on the whole, the carbon produced in making corn-based ethanol is greater than the greenhouse gas reductions that come from displacing fossil fuels.

Now, there is a move towards more sustainable, second generation biofuels such those made from cellulose. Cellulose is a fibre-like material found in all plants and is the most abundant biological material on Earth. Waste leaves, stems and stalks of a plant can be broken down into sugar and converted to ethanol. Native prairie grasses for example are an excellent source for biofuel because they require less water, fewer pesticides and fertilizers, have low nitrogen runoff, and yield more energy than is required to produce the biofuel. And best of all, prairie grasses make great wildlife habitats.

The Canadian company **Iogen** operates a cellulose manufacturing facility in Ottawa, Ontario. It runs the world's first and only pre-commercial demonstration plant where cellulose ethanol fuel is made from agricultural waste such as wheat, oat and barley straw.

Until we can produce truly sustainable biofuels, we have access to other clean alternative energy forms like solar, wind and tidal power which produce few negative impacts on the environment or for those employed in these new green industries. Clean technologies which invest in green, sustainable jobs are also a sound business investment. They are now the third largest recipient of start-up investment funds in the world. If bankers on Wall Street and Bay Street are onside then the Earth's future just got a big boost. And what's more, the renewable energy sector now accounts for 2.4 million jobs worldwide creating opportunities for workers to make a living in cleaner, less toxic work environments.

Some students are cashing in on the new green economy already. Green Students Fundraising (**www.greenstudents.ca**) provides students and their schools with opportunities to sell environmental products like compact fluorescent light bulbs and other environmentally friendly products. Students learn about energy conservation, home owners reduce their energy bills and their waist lines by buying light bulbs instead of chocolate bars a more traditional fundraising choice.

Other fortunate students are getting hands-on experience in learning about renewable energy. Centre Dufferin District High School in Shelburne, Ontario northwest of Toronto, chose Earth Day 2005 to unveil the first solar and wind powered renewable energy system at an Ontario high school. The one kilowatt wind turbine and 12 Photovoltaic (PV) solar panels were donated by Power Up Renewable Energy Co-operative (PURE Co-op), a Shelburne community group. The system provides enough power for the school and is connected to the Ontario power grid.

More importantly, PURE Co-op provided support and expertise to allow students and staff to dismantle the wind turbine at its original location and re-erect it at the school. Construction class students built catwalks and other necessary supports, and students in Physics classes monitor the energy system, conduct tours for other students and community members, collect data and generally have loads of fun!

Louis Mailloux High School in Caraquet, New Brunswick has also installed a wind turbine and solar panels on their roof. This will provide enough energy to power one classroom's lights, computers and projectors. Students in this new green classroom will also learn by creating specific arts and science projects focused on this renewable energy source on their rooftop.

Materials Matter

Thinking about what things are made of and how they are made is just as important to our health and the health of the planet as thinking about our energy sources. Many of the things we buy harm the workers who make them, the environment around us and even the people who use them. Not surprising, the government of Canada tells us that chemical producers are the single largest producers of greenhouse gases in the manufacturing sector. Many chemicals are also made from the same greenhouse-polluting fossil fuels we are trying to avoid in our energy supply. Pesticides for instance are amongst the most energy needy products. Pesticides are also made from crude oil, so when they break down after they are applied on plants they generate more carbon dioxide emissions yet. Of the top 10 polluting chemicals in the car manufacturing industry, all 10 are made from petroleum or fossil fuels. These chemicals are commonly used for cleaning and degreasing, painting or finishing operations, and as chemical parts in glues and paints.

But petroleum is crucial to more than chemicals. Most things made from plastic are also derived from this fossil fuel. The list of things that include petroleum is both long and often surprising. Balloons, bandages, eyeglass frames, fertilizers, ink, house paint, lipstick, panty hose, perfumes, rain boots, shampoo, toothpaste and vitamin capsules all include petroleum.

Fortunately, there are solutions to this problem too. As mentioned above, plants can be changed to cleaner energy sources. But plants can also be changed to chemicals, textiles and building materials. When it comes to the top 10 polluters in car manufacturing, plant matter-based materials such as **biochemicals and natural fibres** are available for each of these processes. All have several advantages over those made from fossil fuels, not the least of which is the reduction of worker and community exposures to hazardous substances and of course, the reduction of the greenhouse gases that cause climate change. For instance, solvents and degreasers can be made from citrus fruits, corn alcohol, sugar fermentation and soybean oil. Paint strippers can also be made from citrus fruits, black liquor (a byproduct of paper milling), crystallized wheat starch, walnut hulls and ethanol fermentation.

When it comes to actual car parts natural fibres like flax, hemp and jute are used as interior supports, reinforcing agents for plastics often replacing fibreglass, and carpet backing. Use of these natural fibres also makes the vehicle lighter and thus more energy efficient. Further, a type of cloth called Ramie is fast becoming a popular car textile. Considered an excellent replacement for polyester, it is also fireproof.

One of the world's most popular furniture companies, IKEA, is dedicated to choosing materials that are naturally fireproof. This way they avoid using harmful chemical flame protectors.

Yet another leading company is Interface, an international carpet manufacturer, with operations in Belleville, Ontario. They provide carpet tiles made from a new product called Solenium. Unlike other carpets fibres solenium is fully compostable, made from natural and degradable fibres. This material also lasts four times longer than traditional carpets.

A company called Cargill manufactures man-made materials from natural fibres as well. Using corn they make plastic food packaging, materials, and carpets too. Examples like this one are often referred to as 'green chemistry.'

Living the "three Rs"

Beyond these efforts many people are also thinking about ways to use less material. Among other things they are keeping in mind that all production requires energy. In this context the "three Rs" take on new meaning. As ever they tell us the first "R" — **Reduce** — is the most important — which means buy less and use less. But this doesn't mean we have to suffer. Rather use only that which we really need. When we reduce our consumption, we reduce our use of the Earth's limited resources and we reduce our energy needs. Next they

tell us to **Reuse**. It's not garbage until you throw it out. Find new and creative uses for old things instead of buying new things. Finally, they say, **Recycle**. Recycling is the re-using of things that would otherwise be thrown away. There are six main groups of recycled products: kitchen waste; fabric; glass; plastic; paper; and metal. Recycling is a way of reusing things and saving the material and energy it takes to replace them. It is also a great way of saving our resources while making money at the same time.

"Blended Bicycles" is the brainchild of three Waterloo, Ontario Catholic schools. Using bicycles recovered from local landfills, students learn how to repair the bikes and then participate in distributing refurbished bicycles to needy members of the community. The program not only diverts materials from landfills but promotes a clean transportation method and gives students a new set of skills.

In Ontario less than 70 per cent of alcohol containers end up in blue boxes, a trend they hope to turn around with a new deposit return program. Customers pay a 10 or 20 cent deposit on each bottle which they get back when the container is returned. While freeing up landfills the program aims to eventually recycle up to 90 per cent of the glass for new bottles, fiberglass insulation and glazes for ceramic tiles.

If we want our Earth to survive, we must begin to think of garbage as a valuable, natural resource and the handling of garbage as resource recovery. The city of Guelph's Wet-Dry recycling program is a perfect example of how to achieve this goal. Their garbage program operates in the same manner as a normal curbside garbage pickup system, except residents keep their waste separate. Wet material, such as food scraps, goes into green bags, and dry material, like paper or plastic containers, goes into blue bags. Rather than transporting their garbage to the local landfill, waste collectors take the garbage to a nearby recycling plant where wet waste is composted and dry waste is sorted and prepared for market. This project created about 70 jobs and reduced 60 per cent of collected waste.

Similar programs can be found in Ontario's Durham Region and Toronto, Edmonton, Alberta and Halifax, Nova Scotia.

Every day we have an opportunity to reduce our waste. You can also join thousands of others during **Canada's Waste Reduction Week**, the third week of October, and do something extra at home, at school or in your community. It's an opportunity too good to waste!

Extended Producer Responsibility (EPR)

While reducing household waste is important it has been estimated that even if all households recycled all their products and materials, it would still only reduce the entire waste stream by one or two per cent. Where we really need to reduce waste is upstream in factories or workplaces. For instance, the making of a single laptop computer generates 4,000 times its weight in waste.

To help deal with the garbage problem some companies form what are called **eco-industrial parks**. They operate on the principle that one company's garbage is another company's raw materials. The Burnside Industrial Park in Halifax, Nova Scotia is one of Canada's largest and most successful eco-industrial parks. More than 1,300 small and medium sized businesses participate. Together, they employ 17,000 people.

Most companies however have yet to adopt these policies. The Canadian Auto Workers and many others view this concept of Producer Takeback or Extended Producer Responsibility (EPR) as one of the most important means to achieve new, sustainable and clean or 'green' jobs. First legislated as policy in 1991 by a German government facing severe landfill shortages, EPR shifts the burden for recycling products discarded by consumers from the public sector back to the private sector, or rather the original manufacturer. This way, manufacturers are inspired to implement design changes that incorporate effective material and product recycling and reuse. Taken to its logical conclusion EPR would see manufacturers repairing or remanufacturing their products. In this system the benefits for all are clear. Resource, energy and water consumption are reduced to a minimum, but worker skill levels are considerably increased. Remanufacturing is

not capital intensive, but it is labour intensive.

Two prominent examples of EPR legislation are Europe's legislation both for electronic and electrical equipment waste and automobiles. Unfortunately in North America these kinds of programs are mostly voluntary and thus few and far between. One of these exceptions can be found in California where six California jurisdictions have passed EPR resolutions and the California Integrated Waste Management Board has adopted EPR directives as part of its core mission.

Five years ago the CAW launched a campaign to lobby the federal government for EPR laws in Canada. Only in recent years are we seeing some movement here in Canada. Several provinces have already introduced **waste electronics regulations** including British Columbia, Alberta, Saskatchewan, Ontario and Nova Scotia. Manitoba's regulations take effect August 2012.

Model regulations would include health, safety and environmental standards for recycling vendors, realistic targets for both reuse and recycling, and incentives to encourage better product design which allow for ease of disassembly and recycling, greater capacity for reuse and refurbishment, and minimize the use of toxic substances. These programs will only succeed with public education, outreach and tough government enforcement.

Toxic use reduction laws

Many of the smarter material choices and 'green chemistry' examples would move ahead faster if laws were in place to encourage them. Among other chemicals, the European Union is also phasing out toxic substances in auto production, including lead, mercury, cadmium and chromium. But one of the most substantive developments is new European Union legislation entitled **Registration, Evaluation, Authorisation of Chemicals or REACH**. It will restrict use of carcinogens and mutagens, and force consideration of alternatives as part of the chemical licensing process. While these changes aren't the whole answer ─ they don't require mandatory substitution of dangerous chemicals ─ this innovative approach attempts to remedy the prevailing policy failure that allows tens of thousands of chemicals to be used without adequate knowledge about their environmental or public health effects. REACH has the potential to trigger cleaner technologies and safer products globally.

Individual members of the European Union have gone farther still, adopting specific legislation banning commercial production and use of carcinogens. One of the more progressive laws was passed in Sweden in 2001. Their sustainable chemical policy requires all new chemicals proposed for use must now be accompanied by evidence that they do not propose carcinogenic risk.

The U.S. has also taken a broad approach to chemical management with implementation of pollution prevention and toxics use reduction initiatives. The federal Pollution Prevention Act of 1990 requires pollution be prevented at the source with engineering and administrative practices that reduce both toxics use and releases. The first specific piece of legislation in this area, however, was the Toxics Use Reduction Act (TURA) established in Massachusetts in 1989. This law is designed to encourage reduction in the amount of toxics used and generated as a result of an industrial process or operation. It is currently the preferred mechanism for complying with all legislation governing worker and environmental health and applies to companies with 10 or more full-time workers manufacturing 25,000 pounds or more of a "reportable" toxic substance. Unlike the federal Toxics Use Inventory, TURA requires companies to report on toxics use not toxics release. Central to TURA is a facility based plan to reduce toxics. Just as important, the state provides support for these facilities in the form of training and research into alternative substances. One study found that because of this law companies generated more than a third less toxic waste and reduced use of toxic chemicals by almost a quarter. They also saved $15 million; this without factoring in benefits to environmental, worker and public health.

In 2009, Ontario passed Canada's first **Toxics Reduction Act**. Ideally, these laws attempt to account for and eventually help reduce the amount of toxics used. Ontario's law obligates companies to:

- ✧ track, quantify and report annualy on the toxic substances they use, make, release, dispose or transfer
- ✧ develop plans to reduce the use and creation of toxic substances.

Many still lobby to strengthen the law. Currently the reduction plans are mandatory, but their implementation is not.

Across Canada, many municipalities passed laws to eliminate the cosmetic use of pesticides in parks, gardens and lawns. Once a patchwork of bylaws, now Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland have introduced provincial pesticide bans.

Green on the go

Like many struggling to find solutions to our environmental challenges, the CAW has not shied away from asking tough questions of themselves and their members. Many CAW members are employed in manufacturing vehicles, trains and aircraft. We know passenger vehicle usage creates about 10 per cent of global greenhouse gas emissions. North Americans have traditionally preferred to drive large vehicles, one reason auto manufacturers have chosen to build many of those models here.

However a combination of skyrocketing gas prices and government efforts to battle greenhouse gas emissions through incentive programs which favour smaller, fuel efficient cars has encouraged Canadians to buy smaller, foreign made cars. As a result, Canadian auto manufacturing jobs have been lost.

Last year CAW members endorsed a policy paper which proposes forward looking solutions intended to **protect both the environment and the jobs of working people**. The CAW firmly believes there needn't be a trade-off between the two.

In their recently adopted Green Auto Strategy the CAW offers these solutions:

- ♦ fund the re-tooling of existing manufacturing plants to produce green fuel efficient technologies like hybrids, efficient engines and transmissions and electric vehicles
- ♦ set mandatory standards for vehicle fuel efficiency by type and size
- ♦ establish clean fuel standards requiring oil companies to make available E85 ethanol and other alternative fuels
- ♦ seek greater investment in public transit and other infrastructure
- ♦ lobby governments to buy more Canadian made public transportation and guarantee comprehensive domestic final assembly
- ♦ negotiate fairer trade agreements, including requirements for all automakers to produce vehicles in Canada, if they are going to sell here.

Carbon offsets

Most forms of transportation emit greenhouse gases. Air travel emits a really big amount. It's one of the most polluting forms of transportation. To lessen the impact of these emissions and emissions in many other areas, you can purchase a carbon credit. A carbon offset is a credit for a reduction in greenhouse gas emissions created by one project, like a wind farm, that is used to balance emissions from another source like flying to Florida. Since this consumer item is relatively new and unregulated it's best to look for offsets which carry a Gold Standard, these are most

likely to help fund new renewable energy projects.

Many airlines now let you purchase carbon offset credits. For instance, since May 2007 Air Canada customers have contributed thousands of dollars to a forest restoration program in Maple Ridge, British Columbia.

Mick Jagger and his Rolling Stones bandmates buy credits to offset their world tours and the National Hockey League Players' Association have encouraged more than 500 of its players to take the carbon neutral challenge by purchasing credits to offset the pollution of flights during their playing season.

Carbon offsets are a small step in the right direction. They make us realize the cost of our carbon dependent lives can yet help fund a new generation of clean energy sources.

Just Transition

Costs associated with the transition to a new economy must not rest solely on the backs of workers or their communities who just happen to be employed in polluting industries. When the gasoline additive tetraethyl lead was banned in Canada for instance, there wasn't a living, breathing human being who said this wasn't best for our environment and our health, particularly the health of children. But in the process 2,000 Sarnia-area petrochemical workers paid a heavy price as a direct result of the ban. More than a decade later only 25 per cent of them have jobs with equal or higher salaries — 37 per cent are still unemployed.

To help address situations like this, organized labour, supported by others, is calling for government "just transition" policies and action. Essentially "just transition" is about fairness and environmental justice. It is about quality employment in an economy based on sustainable production. It is based on the principle that workers should not bear the brunt of economic change in the face of environmental necessity. If left to their own devices some workers would be the only losers in the pursuit for an eco-friendly economy.

The CAW and others have developed policies supporting transition measures to help protect workers who face major industrial change and restructuring initiated in the name of sustainability and environmental protection. It includes elements like retraining, income security and re-employment in alternative industries and ventures.

Workers employed in the extraction and refining of fossil fuels will suffer the greatest displacement. And yet through a fair and just transition they support tough measures to reduce our greenhouse gas emissions. They, like the CAW, understand there are no jobs on a dead planet.

LIVING SUSTAINABLY — ONE PURCHASE AT A TIME

Now that we have reviewed some guiding principles, let's examine some of the consumables of everyday life. Can we make better more sustainable choices?

Food basics

Everyone and every living thing need food or nutrients to survive. We lead busy lives which for most of us are based in large, urban areas, away from fertile farmland. Even if we wanted to, few of us are in a position to grow enough food to feed our families.

Our week will undoubtedly involve a trip to a local supermarket. However, once there we are in a good position to start making better choices about what we buy. Our choices can help us and others to live more sustainably.

Food is big business. The value of **international food trade** has tripled in the last 40 years. The quantity of food shipped between nations has increased fourfold even though the population has only doubled. If we travelled as much as our food we'd be collecting thousands of frequent flyer points.

Where we live also explains a lot. More of us live in cities now, so we're further from areas where food is grown and processed. Add to this the introduction of refrigerated long haul trucks a generation ago when gas prices were much cheaper and we developed a long-distance food supply.

Farms now are fewer in number but bigger in operation. The factory farm is replacing the small, family farm. We know that transporting our food requires lots of energy, but fossil fuels are also heavily used to power farm equipment, to produce fertilizers and to process food.

We also need to be realistic. We live in the northern hemisphere so we can't grow grapefruit or bananas. But with the global food market we access different foods from around the world and enjoy exotic produce all year long. The sticker price however doesn't begin to include the real costs when you factor in how the food arrived.

It's been estimated that the carbon dioxide emissions associated with producing, packaging and transporting food for a family of four is about eight tonnes a year. Another groundbreaking study by the Leopold Center for Sustainable Agriculture in the U.S. examined foods brought into several American food terminals and calculated distances travelled and their associated carbon emissions. They calculated the average American meal travels about 2,400 kilometres or **'food miles'** from where it's grown or raised.

Similar studies have been conducted here. A study conducted for the Region of Waterloo Public Health reports that imported foods create 100 times more greenhouse gas emissions. But what's more compelling is this: if residents bought food grown locally in South-Western Ontario they could reduce annual greenhouse gas emissions by 49,485 tons, equivalent to taking 16,191 cars off the road.

We know it's affecting our food supply and our farmers. It's been estimated Ontario farmers alone suffer $70 million a year in crop damage due to smog.

You might also want to think twice before you wolf down that next burger or indulge in a tasty New Zealand rack of lamb. Canadians eat more than twice the global average of meat, only Americans and Australians eat more meat.

Raising livestock consumes lots of water and lots of land. Water used for meat production and processing accounts for 14 per cent of the environmental impact a typical Canadian household has on our water habitats. An environmental studies graduate student at Queen's University in Kingston, Ontario calculated that eating locally grown beef had the equivalent impact of removing 1,948 cars from the road every year.

Runoff from large farming operations can increase risk of contaminating water supplies. Agricultural runoff from large factory farms contributed to E.coli contamination of the water supply in Walkerton, Ontario in 2000 where seven died and hundreds of others took ill. A similar incident occurred in North Battleford, Saskatchewan a year later.

There are lots of challenges but there are just as many easy ways you and your family can curb your 'foodprint'!

Food for thought

- ✔ Whenever possible, buy locally grown produce and bring your own reusable bags to carry your food home.
- ✔ Encourage retailers to buy local produce. Local Flavour Plus is a Toronto based non-profit organization that certifies farmers and processors who produce local food in environmental and sustainable ways and links them with consumers. The University of Toronto has joined them and become the first Canadian university to require local foods form part of menus in some residences and cafeterias on campus. American students have spearheaded similar moves on campus.
- ✔ Contact your Ministry of Agriculture or a lower growers association to find out what is in season and grown locally.
- ✔ Grow, pick and preserve your own food. Start a garden in your yard or better, green your roof and reap your

harvest there! These flat roofs specially covered in dirt and vegetation can be a place for your local garden but there are other benefits too. These roofs cool the actual building and the area around it. The insulating capacity of green roofs creates big energy and greenhouse gas reductions. Further, these green roofs help manage sewer overflows from storm water and reduce urban runoff.

- ✔ Eat more fresh food and less processed food.
- ✔ Choose food items with as little packaging as possible.
- ✔ Go meatless at least one day a week and have fun experimenting with vegetarian dishes.
- ✔ Support local, community gardens.
- ✔ Join the 100-mile movement and have a potluck with dishes made from only locally grown foods.

Buying Organic

Growing concerns about health impacts of chemical additives, pesticides and hormones in our food supply have led many more of us to reach for certified organic foods. In 2006 more than half of Canadians purchased an organic product. Not surprising since our grocery shelves are lined with lots of choices and now thanks to increasing consumer demand, the cost of these items are more in line with regular food products.

Studies also tell us those working on or living near farms where pesticides are sprayed develop more cancer. So when we choose to buy organic we are also helping to protect our rural neighbours against unnecessary chemical exposures.

Other studies have shown that organically grown produce contain more vitamins and minerals than conventionally grown food. However others are now concerned the distances many organics travel offsets their benefits. Are foods that are shipped thousands of kilometers sustainable? Currently about 80 per cent of organics consumed in Canada are imported. So in fact, those locally grown carrots may harm the environment less than organic ones trucked from California. The British-based U.K. Soils Association has even suggested barring foods that are transported by air from being labeled organic because of their associated carbon emissions.

Clothes to home

When we start earning a few dollars from our first part-time job, chances are we're saving up for something special, that great pair of basketball shoes we've been wanting or a couple of new T-shirts sporting the latest cool messaging. But be honest, are those shoes and T-shirt something you need or something you simply want?

Canadians buy but we also dispose of a lot of clothing items. If we gathered and compressed all the textiles Canadians throw out every year, we could fill the SkyDome (now called the Rogers Centre) three times.

Too often we buy a shirt because we like what it says. But is it really cool to become walking billboards for someone else? Maybe companies should start paying us for advertising their messages!

North Americans love their name brands, but when was the last time you looked at a label to see where it was made? American households buy on average 40 T-shirts a year of which 94 per cent are imported.

Like our food, our clothes have gone global. Clothing has dropped in price largely because of inexpensive imports, mostly from China and Bangladesh, Canada's two biggest clothing importers. This was made possible in 1995 when the World Trade Organization eliminated import limits on clothing from developing nations.

While lower prices are good news for us consumers, it's meant a loss of jobs for many close to home. The Canadian clothing industry has been hard hit by overseas competition and many Canadian firms have simply decided to join them by setting up shop overseas. From 2000 to 2005 the Canadian clothing industry lost 94,000 jobs.

Like the food that travels thousands of miles to our plates, our clothing takes a similar journey. Every piece of clothing leaves its own extra large size environmental imprint. Before you buy another cotton T-shirt think again. Although it's a natural fibre you would think it would be better for the environment, but that's not necessarily the case.

In the U.S. cotton growing uses 22 billion pounds of weed killer, three times as much as an acre of wheat. What about synthetic materials like nylon and polyester? These fibres use a lot of petroleum, a non-renewable resource, in their production. Add to this the chemicals and dyes used to treat the cloth and the health risks faced by workers exposed at textile plants and it doesn't seem like such a bargain.

Some of the world's clothing manufacturers might have their head offices in New York and Paris but they operate their factories in poorer countries where the cost of doing business is far less expensive. A growing movement has built up around concerns for workers in these factories often called sweatshops. It is well documented that these workers are poorly paid and work under unsanitary and unhealthy conditions. They are often disciplined if they try to come together and form a union to protect their rights. Around the world garment workers have been joined by social and environmental groups to improve working conditions and end sweatshop abuses through **'no sweat' campaigns**.

Additional reports are coming to light about the environmental impacts of apparel plants overseas. One cluster of textile/dyeing plants in southern India is reported to be dumping seven million litres of waste water every day on their land, leaving local water supplies unusable.

Greening our closets

Before you purchase another trendy piece of clothing ask yourself if you can live without it. Cutting out unnecessary purchases is the best gift you could give the environment.

Those who love their clothes as much as they love the Earth come together at the annual Ethical Fashion Show devoted to eco and fair trade clothing from around the world. One of Canada's contributors is the Montreal-based shop Moly Kulte. Run by two artists with visual art and graphic design backgrounds, they create unusual designs made of 70 per cent recycled garments.

Keep these tips in mind next time you're out shopping:

- ☒ Don't buy what you really don't need.
- ☒ Read the label to find out where it's made and what it's made of.
- ☒ Donate used clothing to charitable groups or thrift stores but only after asking friends and family if they want your castoffs. And, if you really need something new, consider something old. Head back to the thrift store and look for something gently used!
- ☒ Sew/repair/alter your clothes and wear them for as long as you can. Remember, everything always comes back into fashion eventually!
- ☒ Do some research to find out which companies take back their garments to be recycled and rewoven into new items (eg. Patagonia; Mountain Equipment Co-op).
- ☒ Buy clothes made of sustainable, longwearing material like hemp or bamboo. These plants are hardy and can withstand bugs minimizing the need for pesticides and herbicides.
- ☒ Source organic cotton clothing. Each organic cotton T-shirt you buy eliminates the use of 150 grams of agricultural chemicals.
- ☒ Participate in an anti-sweatshop campaign like those led by the Canadian-based Maquila Solidarity Network. They have helped set up 'no sweat' policies at some high schools where uniforms are mandatory. Currently there are also 15 Canadian universities

with no sweat licensing policies for their campus gear. Check out their model policies and resources at **http://en.maquilasolidarity.org/nosweat**.

- Host a fair trade fashion show at your school and spread awareness of the problems of garment workers around the world.
- Encourage public institutions to adopt a 'no sweat' policy for purchasing uniforms and work clothes.
- Ask your parents to buy clothes that don't need to be dry-cleaned. This process uses a lot of dangerous chemicals. Look for a safer, wet cleaning service or an eco-friendly drycleaner in your community.
- Hang your clothes out to dry! Ontario is seeking public input to end municipal bans on clotheslines. You could save about six per cent on your home electricity bill each year by hanging your clothes to dry instead of using your dryer!

Our wired world — electronics and electrical equipment

We love our gadgets, especially the electronic ones. We buy them and then when the new and improved model comes out, we buy that one too.

Every year a new computer game or application is marketed, especially before big buying seasons like Christmas. The latest reality-based computer software and games also inevitably use more memory and often require new electronic hardware and additional video cards too. Manufacturers in some cases are engaging in **planned obsolescence**. That means manufacturers actually design products to stop functioning after a certain period of time or amount of use. That in turn drives consumers to replace these non-functioning items with new ones.

More and more of our free time is spent watching or playing reality-based games and shows. And then we want something still more realistic. We're no longer satisfied to own 'guitar hero', we want the whole band. How about starting your own band with real musical instruments? Now that's a reality check!

We have filled our lives with electronic goods. Every year across Canada it's estimated the dumping of used personal computers alone adds 4.5 tons of cadmium and 1.1 tons of mercury to our landfills. In 2004, 14.5 million pieces of electronics and electrical equipment such as appliances, computers and cell phones were discarded in Ontario. Only 9.1 per cent of these were collected for reuse or recycling.

The European Union says electronic waste is growing at a rate three times faster than the average waste stream. Traditional waste authorities struggle to address this high tech trash and find safe ways to recycle and dispose of it. Electronic waste creates a particular problem because it contains toxic materials like lead, cadmium, mercury, chromium, flame retardants and others which can leach into our soil and water.

Workers are at increased risk too. A large scale study of U.S. computer factory workers found they were more likely to die of cancer, especially cancers of the brain and central nervous system.

While statistics aren't readily available, the vast majority of our electronic waste is shipped to China, India and Pakistan where it is recycled and heavy metals extracted exposing still more workers.

Green Machines

Fortunately, more and more companies are becoming part of the solution by volunteering to take their products back at the end of their life to safely recycle them. Some of the computer manufacturers who will take back your old computers for free (check the details though) are Dell, HP and Apple. Visit **www.computertakeback.com** to learn more about their programs.

An even better approach is to build products that are more **durable** and made of safe, sustainably produced materials. The industry-led Electronics Product Stewardship Canada (EPSC)

represents major Canadian electronics manufacturers working to design, promote and implement sustainable solutions for end-of-life electronics. For instance some laptop manufacturers are replacing plastic exterior casings with lightweight metals that eliminate the need for toxic flame retardants without compromising fire safety. Lighter, more durable metals like aluminum and magnesium are also being used more often to make computers more durable and more valuable to recycle.

Producers are also pursuing alternatives to mercury-containing bulbs including the use of organic light-emitting diode (OLED) lights, now used in many cell phones and laptops, because they last longer and use less energy. Built-in energy saving features, or 'sleep' modes, are now standard on most computers. Good thing since the U.S. Environmental Protection Agency estimates companies spend more than $1billion a year on electricity for computers and monitors that are turned on but not being used!

Consumers are increasingly buying newer energy efficient models. This is an important feature but even more important is durability. It's estimated about 20 per cent of a computer's total energy consumption comes from its use; the other 80 per cent is from its production.

A good design also means making it easy to recycle by using fewer screws, more snap-fit parts and highly recycle materials like aluminum. The recycling of e-waste in developing countries poses risks to both worker health and has the potential to contaminate local environments. To address these concerns the EPSC has introduced a Recycling Vendor Qualification program to ensure qualifying vendors maintain a high standard for both environmental and occupational health.

Like those of us who try to do four things at once, newer applications might reduce the number of electronics per household. More and more products are designed to perform multiple functions, which mean you can use your laptop as a workstation, internet café and entertainment centre! Or use your cell phone to call friends, organize your social calendar and take photos on your school trip!

Meantime, CAW members in Windsor, Ontario are also dedicated to finding new local homes for old computers. This way they will keep computers from filling garbage dumps and eventually polluting our water and soil. They call their program **Computers for Kids**. Working with others in the community, like the Sandwich Teen Action Group, CAW members fix up older donated computers and then give the computers to computer-based, after-school and summer learning programs. So far they have refurbished almost 300 computers. These computers in turn help some 200 children learn with computers each day. Further, many teens who volunteer with the group earn their 40-hour, volunteer community service credit.

Even more than their computers, Canadian teenagers love their cell phones and will dispose of three of them before the age of 20. That's a lot of e-waste. What do cell phones and gorillas have in common? More than you think. Coltan is a metal needed in the production of a key electrical element for circuit boards commonly used in cell phones, laptops, pagers and other electronic devices. Coltan is mostly found in rainforests in the former republic of Congo also home to endangered lowland gorillas.

Here's a unique program that doesn't monkey around when it comes to saving at risk species. **Eco-Cell** is a worldwide phone recycling program which works with environmental groups and zoos. The Toronto Zoo, an Eco-Cell partner, has recycled over 4,000 phones since 2006. Funds generated are directed to gorilla conservation programs in Africa and to the Toronto Zoo Endangered Species Recovery Fund.

What else can you do?

- Use a computer at your local library
- Refurbish your current computer instead of buying a new one
- If you must buy a computer do your homework first. Visit **www.greenpeace.org** and read their Guide to Greener Electronics to help identify which companies are doing the most to eliminate toxic chemicals from production and have strong takeback and recycling programs.

- Put your computer on power management or sleep mode. Visit **www.climatesaverscomputing.org** and make your pledge to power-efficient computing. Power to the people!
- Buy Energy Star products
- Share cell phones within your family and schedule their use
- Invite friends over to play with your latest e-toys so they don't feel the need to buy their own
- Limit the amount of time spent on electronic entertainment and head outdoors to indulge in your favourite sport instead.

BRINGING IT HOME

Finding answers to global issues like climate change can seem really overwhelming. But oddly enough, answers often come once we've asked the right questions. Sometimes the answers are even closer to home than you'd imagine.

Think about Dorothy, that adventurous little girl portrayed in the Wizard of Oz. She travelled to exotic, far-away places but in the end it was her family's Kansas farm where she felt really safe and secure and where she wanted to make her life.

Canadians are eager to find solutions to our climate change crisis and they're starting right at home. Sixty per cent of Canadian households now use energy efficient compact fluorescent light bulbs and water-saving showerheads and low-flush toilets, while 40 per cent have programmable thermostats. More are using public transit.

And most Canadians are committed recyclers although one in five said they had put electronics in the garbage with one-third of Canadians admitting they did not know how to dispose of these products.

If we all made a commitment imagine what entire communities could achieve. Reduced consumption of consumer goods would help ease the strain on already overloaded landfill sites. Greater investment in and use of public transit would lessen greenhouse gas emissions and boost opportunities for local manufacturers of buses, subways and streetcars. Local jobs mean families can live closer to where they live, avoid long daily commutes and enjoy more time connecting with family, friends and community groups.

While our consumer driven society sends us messages like "go big or go home" turns out it's better to go small and go home. American studies have compared the economic impact of small local businesses versus large chain stores. For every $100 of consumer spending at a local firm, more of that money stayed in the local economy by purchasing from local suppliers and through greater support for public services and local charities. That's how communities are built.

Local communities however will only thrive if they are sustainable too.

If we are what we buy, we need to invest in our future. We need to stop our excessive ways and take from the Earth only what we need. The return will make us all the richer. We've got nothing to lose and the world to gain!

For greater awareness and action

Look to the World Wide Web

There are many places to find information about our environment and climate change on the Internet. Just as important, there are many more with information about how you, your family and friends can help improve our planet. The following are just a few places to start. You can find more links on the CAW and Workers Health & Safety Centre sites.

Canadian Auto Workers
www.caw.ca

Workers Health & Safety Centre
www.whsc.on.ca

Youth and Eco-education links

Earth Day Canada
www.earthday.ca/pub/home.php

Environmental Youth Alliance
www.eya.ca

Pembina Green Learning
www.greenlearning.ca

Youth Action Network
www.youthactionnetwork.org

The Otesha Project
www.otesha.ca

www.350.org

Green economics links

Clean Production Action
www.cleanproduction.org

Pembina Institute
www.pembina.org

Rocky Mountain Institute
www.rmi.org

Worldwatch Institute
www.worldwatch.org

Eco and sustainable living links

Basel Action Network
www.ban.org

Maquila Solidarity Network
www.maquilasolidarity.org

Ontario Greenbelt
www.ourgreenbelt.com

People & Planet
http://www.planetfriendly.net/living.html

Fair Trade Canada
www.fairtrade.ca

Environmental links

Blue Green Canada
www.bluegreencanada.ca

David Suzuki Foundation
www.davidsuzuki.org

Environmental Defence
www.environmentaldefence.ca

Greenpeace Canada
www.greenpeace.ca

Labour Environmental Alliance Society
www.leas.ca

Sierra Club Canada
www.sierraclub.ca

Program Co-Sponsors

The Canadian Auto Workers Union (CAW) represents more than 200,000 workers across Canada. We build cars, planes and trains. We work in the transportation industry, including trucking, busing, rail and airlines. We also work in the fishing industry, hospitals, hotels and restaurants. As worker representatives we are well positioned to help achieve measures necessary for economic sustainability. However, we are citizens and parents too. In this capacity, we are equally concerned with the education of our children. Moreover, we understand the power that young people possess to change our world if given the opportunity. For our future and our children's future then, the CAW is committed to reaching out with our unique environmental message.

To learn more about the CAW visit **www.caw.ca**.

The Workers Health & Safety Centre (WHSC) is designated by the government as Ontario's health and safety "training centre". We offer training and information services to workplace representatives in every sector of the economy and every region of the province. All focus on controlling, or better yet eliminating, occupational hazards at their source. WHSC delivers training programs using a participantcentred and "workers training workers" approach. For more than a decade the WHSC has also proudly offered health, safety and environmental awareness programs aimed at young workers.

To learn more about the Workers Centre visit **www.whsc.on.ca**.