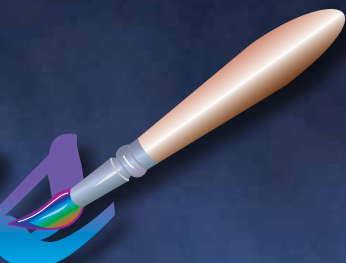




# Landscapes



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Publication Mail Agreement No. 41338519



# In Good Company

Recognition by peers is doubly valuable when accompanied by enthusiastic support from friends.

This year, Landscapes magazine was the recipient of a prestigious international award, the “Communicators Award of Excellence” for design and editorial achievement.

*given to creative professionals  
by creative professionals*

The Communicator Awards is the leading international awards program honouring creative excellence in communications initiatives. Founded by communication professionals over a decade ago, The Communicator Awards judge submissions from over 9,000 entries from companies and organizations of all sizes, making it one of the largest awards of its kind in the world.

The Communicator Awards are given to creative professionals by creative professionals as a tangible acknowledgement that their work has distinctive, leading quality. The Communicator Awards provide an equal chance of winning to all entrants regardless of company or agency size and project budget. In this respect, the nomination of Landscapes placed FORED, the publisher, in competition with the flagship publications of large, international organizations.

The Award of Excellence, the highest honour in the competition, is given to those entries whose ability to communicate puts them among the best in the field. The Award of Distinction is presented for projects that exceed industry standards in quality and achievement.

*Provide balanced, informative  
and stimulating articles on  
sustainability themes*

For well over a decade, the Communicator Awards has honored the best creative work in the communications fields. They are sanctioned and judged by the International Academy of the Visual Arts, an invitation-only body consisting of top-tier professionals from a “Who’s Who” of acclaimed media, communications, advertising, creative and marketing firms.

Through 15 years of publication, FORED has maintained a single editorial policy. It states, “Provide balanced, informative and stimulating articles on sustainability themes and give them creative visual appeal.” This approach has earned us previous awards including designation as the Best Association Magazine in Canada by the Institute of Association Executives.

Without doubt, the best part of winning awards is that it is also a win for our friends and supporters. This is the company we keep. Their letters of support, seen below, make this all the more worthwhile.



## From the Readers

Congratulations received for winning Communicator Award

A number of Landscapes readers sent best wishes on learning of our award. Here are a few.

“Congratulations on this prestigious award, well deserved!”

—Brian Simpson, Director, BC Forest Protection Program, Ministry of Forests and Range

“Congratulations on winning the award...the magazine really does look good! Please pass on my congratulations to Cheryl for the good work. I know my daughter who is a teacher on Salt Spring loves not only the magazine but your website as well...she has found all sorts of good ideas that she has incorporated into her teaching. On behalf of Vancouver Foundation we are honoured to have played a small part in your success!”

—Faye Wightman, President & CEO, Vancouver Foundation

“Congratulations!!”

—Darrell Robb, Director, Aboriginal Affairs Branch, Ministry of Forests and Range

“Congratulations to FORED for being awarded the Communicator Award of Distinction. You should feel very proud. Well done!”

—Phil Taudin-Chabot, Manager, Coastal Fire Centre, Protection Program, Ministry of Forests and Range

“Congrats to FORED!”

—Dr. David Zandvliet, Assistant Professor of Science, Technology & Environmental Education, Simon Fraser University

“Congratulations!!”

—Kim Steinbart, Provincial Fire Information Officer, Protection Program, Ministry of Forests and Range

“That is great news! Congratulations to everyone.”

—Margaret Grenier, Artistic Director Dancers of Damelahamid Society First Nations Dance Troupe and Aboriginal Liaison/Education Coordinator, HR MacMillan Space Centre, Vancouver

“Congratulations!!! Such wonderful news...and well deserved!!! You know you can always count on my support. Again, truly, congrats on the well earned honour.”

—D. Simon Jackson, Founder and Chairman, Spirit Bear Youth Coalition, Executive Producer, The Spirit Bear CGI Movie

“Congratulations! What a marvelous achievement. Your notice has been circulated to our entire branch —and everyone is excited.”

—Ursula Cowland, Director Licensing and Grants Div., Gaming Policy and Enforcement Branch, Ministry of Housing and Social Development

“Congrats! Good work. It is always an interesting read.

—Vikram Kumar, President, Unilogik Systems Inc., Vancouver



*Landscapes* is published by FORED BC and circulated to members and community leaders in the public and private sectors, First Nations and the non-profit community. FORED BC is a non-profit association that provides information resources and consulting support to organizations and volunteers involved in building sustainable communities.

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## CHARGING AHEAD

France has almost 50,000 vehicles in its national postal operation and has a five-year plan to replace the majority of them with electric cars. The cars will be developed as a joint venture between a Milwaukee car parts maker and a French battery company.

*much more expensive than the traditional gasoline-powered vehicles*

operating expenses because the costs of charging the electric car will be about one-sixth of what it takes to fill current vehicles with gas.

The postal authority acknowledges that the choice will be much more expensive than the traditional gasoline-powered vehicles because the high cost lithium-ion batteries will account for 60 per cent of the vehicles price. The company claims, however, that it will save on

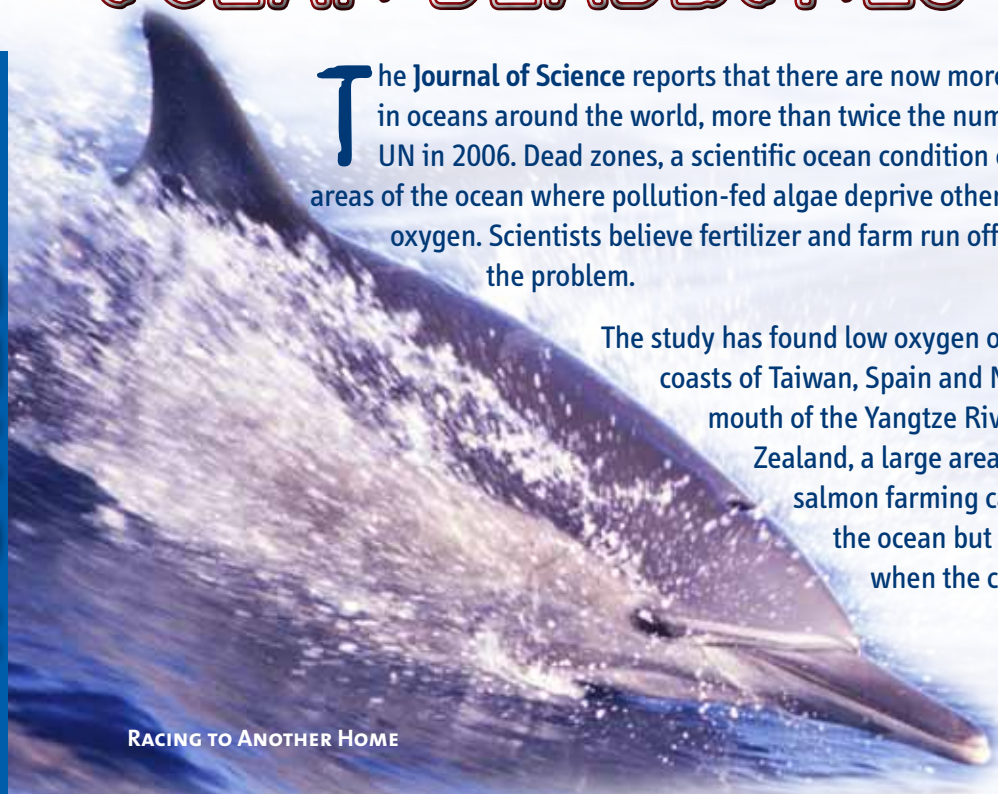


THE FRENCH COLLECTION

## OCEAN DEADZONES

The *Journal of Science* reports that there are now more than 400 dead zones in oceans around the world, more than twice the number reported by the UN in 2006. Dead zones, a scientific ocean condition called **hypoxia**, are areas of the ocean where pollution-fed algae deprive other living ocean life of oxygen. Scientists believe fertilizer and farm run off as well as sewage is the problem.

The study has found low oxygen ocean areas off the coasts of Taiwan, Spain and Norway as well as the mouth of the Yangtze River in China. In New Zealand, a large area became hypoxic after salmon farming cages were placed in the ocean but began recovering when the cages were moved.



RACING TO ANOTHER HOME

## A WORLD WITHOUT CHOCOLATE

The Nature Conservation Research Council has issued the warning that in 20 years time chocolate could be as scarce and expensive as caviar.

The warning is based on what is seen as unsustainable farming practices. Cocoa usually grows in rain forest conditions that have high biodiversity. The farmers clear the forest and use the manufactured seeds to increase output over the short term. The Council claims that this leads to soil erosion and a shorter life span for trees.

In West Africa, where most of the world's cocoa is grown, a chocolate bar is considered to be an out-of-reach luxury for the people who pick the beans.

## DRY RUN FOR DISASTER

The International Water Management Institute has warned that many countries are facing extreme water scarcity either from natural causes or a lack of investment in water infrastructure.

Compounding this, nearly one billion people in the world who are undernourished also live in countries with inadequate water.

The water crisis is closely related to the food crisis. The Institute calculates that it requires one litre of water to produce each calorie of food. Therefore, for the typical diet in western countries, between 2,000 and 3,000 litres of water are needed to produce the food to feed one westerner every day.

As large countries like China and India are moving towards a protein diet, particularly in their middle class, global water

demand is increasing exponentially.

short supply. Over 700 scientists involved in the report called "Water for Food, Water for Life" concurred that the world will not have enough water to feed its growing population in 25 years. As a crisis, this is a much shorter time horizon than the 100 year projections used for climate change.

The growing water crisis has inadvertently pitted urban dwellers against poor farmers. As the world urbanizes and searches for higher living standards, there is increased competition between city and farm for scarce water. As part of this, there is a greater priority placed on investment for improving urban water supplies and sanitation and as a consequence inadequate attention is paid to providing water for the rural community. This competition has generated strong investment interest. For example,

the Ontario Teachers Pension Fund has invested substantially in a private sector water company that sells drinking water to residents of Chile. It is one of the ironies of this growing crisis that while the idea of water for profit may raise eyebrows in the classroom, it is seen as an acceptable investment for funding teacher pensions.

*the idea of water for profit is seen as an acceptable investment for funding teacher pensions*

By 2030, the Institute projects that there will be an additional 2.5 billion people in the world, meaning that there will be a need to find over 2,000 cubic kilometres of fresh water to grow the food to feed them. Currently over 7,500 cubic kilometres of water are being used to produce food, and water is in

...continued on page 16

# WHO WAS HERE FIRST?

A study by two Canadian archaeologists published in the journal *American Antiquity* argues that Europeans reached the continent of North America before the Inuit. Specifically, the study argues that the Norwegian settlement in Newfoundland was established 150 years before the migration of the Thule people – ancestors of the modern day Inuit – who migrated from Alaska and pushed their way across Canada's polar landscape. According to the study, the Vikings arrived in Newfoundland around the year 1000 and the Thule arrived 200 years later. It further contends that an earlier Eskimo (Inuit) culture, called by scientists the Dorset culture, was over run and extinguished by the Thule as they migrated eastward.

By re-dating two sites in the Western Arctic, the researchers contend that the Thule did not reach Canada from their Alaskan homelands until after 1200.

*They established farming communities similar to those in Greenland*

According to Viking oral tradition later recorded in written text in the 1200s, the Vikings referred to Newfoundland as Vineland because of its relatively mild winters compared to conditions back home. They established farming communities similar to those that they had established in Greenland during its warm period but eventually returned to Greenland after encountering hostilities with native Aborigines.

*the study argues that the Norwegian settlement in Newfoundland was established 150 years before*



DRESSED FOR EASTWARD TREK

## OIL SANDS MAKEOVER

The 28 companies involved in developing Alberta's oil sands have launched an information campaign to counter what they claim is unbalanced criticism of the project. The companies including Syncrude and Suncor, as well as companies from Norway and Korea with investments in the oil sands, are hoping to counter perceptions that the energy project is devastating a land mass the size of Florida.

Among the contentions of the oil sands developers are the following:

- Oil sands companies have over 1,500 aboriginal employees and have awarded contracts in excess of two billion dollars to aboriginals.
- Oil sands mining operations affect only 0.01 per cent of the boreal forests.
- The oil sands account for only four per cent of Canada's greenhouse gas emissions.
- Since Canada accounts for only two per cent of global greenhouse gas emissions, this means that **the oil sands account for 0.08 per cent of greenhouse gas emissions worldwide, or less than 1/100th of the global total.**

## HYDROGEN BUBBLE BURSTS

Organizers for the winter Olympics in Vancouver have planned for a fleet of hydrogen buses to whisk athletes to Whistler Village for competitions. The hydrogen buses are seen as making an important statement on the province's environmental sensitivity.

However, a group of Whistler residents takes a dissenting view. They have staged demonstrations on the highway objecting to the proposed location of a hydrogen bus gas station because they claim it will jeopardize natural wetlands and threaten the resident beaver population.

## COOPERATION FOR GENERATIONS

The Great Lakes have long been a laboratory for cooperation between Canada and the United States. Four of the Great Lakes share borders with both countries, while one of them, Lake Michigan, is totally situated within the USA.

The lakes contain nearly 20 per cent of the world's fresh surface water. While thirsty states such as California may look at these fresh water treasures with envy, both countries are united in their opposition to water diversion.

*Continued on Page 16...*

## THE COAL CONNECTION

The Saskatchewan Power Corporation is looking for developers to produce a coal fired plant capable of capturing and burying carbon dioxide. The process of burying carbon dioxide is called carbon capture. It is seen as a critical step in reducing greenhouse gases. Given that coal plants in the US account for 30 per cent of greenhouse gas

*the concept of using coal as energy to fight climate change may seem contradictory*

emissions, according to the US Energy Department, the concept of using coal as energy to fight climate change may seem contradictory.

The carbon capture plans of Saskatchewan Power, owned by the provincial government, are not primarily intended as a strategy for fighting climate change. The utility plans to use the captured carbon to force oil out of hard to reach deposits. Planners contend that if they can produce more oil with captured carbon,

the revenues from the sale of the oil will offset the cost of carbon capture technology, thereby making it cheaper in the long run and ultimately contributing to the reduction in global warming.

## ALTERNATIVE ENERGY IN CANADA

Canada's provinces are using a variety of development tools at their disposal to ensure that they keep pace with changes in alternative energy.

In Quebec, the government-owned utility, Hydro Quebec, issued the single largest tender for wind farm projects in the world, calling for \$5.5 billion of such projects to be built in the next seven years. When the projects are completed, they should provide 10 per cent of the province's electrical needs.

In British Columbia, a call was issued for clean power over the summer for enough alternative energy to supply 500,000 homes. Planning calls for wind power as well as run-of-river projects and biofuel development, all with the objective of making the province self sufficient by 2016.

Ontario is in the third phase of a renewable energy program begun in 2005 and is planning to add 4600 megawatts of wind energy to its electrical system by 2020. Alberta, with an abundance of oil, has 524 megawatts of wind power installed.

The wind farm industry uses a ratio of one megawatt as enough power to generate electricity for 1,000 families.



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## NAUGHTY NIBBLERS

While images of polar bears have become commonplace in stories about how climate change is affecting the arctic, a new study suggests that musk ox may be part of the changing climate picture.

A five year experiment in Greenland conducted by scientists from the University of Pennsylvania suggests

*the musk ox is not contributing to climate change through burping*

that the placid musk ox herds may be adding to the global warming problem. Unlike the much maligned cow, the musk ox is not contributing to climate change through burping. Instead, it is because it is nibbling away at plants growing in a warmer arctic and thus eliminating the ability of the plants to store carbon dioxide.

A paper produced in the Proceedings of the National Academy of Sciences warns that "their grazing could have important consequences for the ability of shrubs to reduce atmospheric carbon dioxide."

The study does not detail whether the eating habits of musk ox played a climate changing role when Viking farms flourished in a warm Greenland 1000 years ago.



## The Last Dance For Eagles

At one time the use of pesticides, especially DDT, threatened to eliminate the eagle population. Now the increasing commercialization of Indian pow wows in North America may be putting a strain on eagle populations as some unscrupulous suppliers seek to feed a hungry market for eagle costume feathers.

It takes five years for an eagle to reach the adult stage where it can show its full colours. Even at that, it has only a 50 per cent chance of reaching adulthood. This has prompted most jurisdictions to

*some unscrupulous suppliers seek to feed a hungry market*

take vigilant steps in order to protect the king of birds.

Pow wows have become big business in North America. In Toronto, Canada's largest pow wow attracts 40,000 spectators and has 1,000 participants. Pow wows are also popular events in Europe where city dwellers in Germany, Denmark, England, Russia and other countries will take to the countryside for the weekend, live in waterproof teepees and wear European-tailored "traditional" North American Indian costumes festooned with feathers from rare North American eagles.

All of this has driven a booming market. According to David Hancock, a North Vancouver researcher who has



POPULAR AMONG EUROPEAN URBANITES

*city dwellers live in waterproof teepees and wear European-tailored "traditional" North American Indian costumes*

written several books on eagles, this is driving a huge demand for feathers from the Golden Eagle and the Bald Eagle.

Although pow wows have long historical tradition in aboriginal communities, many are now staged in urban centres where a live eagle is never seen. Dancers' costumes featuring eagle feathers have been adopted by cultures where eagle regalia was never part of the cultural

tradition.

Today, major American casinos offer pow wows as part of their entertainment. A website called powwow.com contains information about New Year's Eve pow wows throughout North America. The web

*each year 1,000 eagles are killed in British Columbia*

site features interactive advice columns on how to make a head dress which is referred to in pow wow culture as a mop-top. One emailer on powwow.com asks whether he could "start a costume with two wings and a tail."

With thousands of dancers participating and a typical costume requiring anywhere from 30 to 80 feathers, eagles are in high demand. A British Columbia conservation officer quoted in the Globe and Mail estimated that each year 1,000 eagles are killed in British Columbia, adding that the number is conservative because of the difficulty in controlling large wilderness areas.

Although pow wow dancers are judged on their dance moves rather than their costumes, elaborate costumes have become part of the competitive edge in dance competitions where winners can earn \$2,000 for a single dance.

In the United States, eagle feathers can be obtained by native American Indians from a federally run eagle repository for birds that have died naturally. It can

## NEW RESPECT FOR FLY BRAINS

Apparently flies know when they are going to get whacked.

Scientists at the California Institute of Technology have used film research techniques to prove that flies detect an imminent swatter encounter and move quickly to plot their escape.

According to the study, within 100 milliseconds of spotting a swatter, the flies move their bodies into a position that allows them to extend their legs and save themselves.

Researchers claim the study shows how rapidly a fly's brain processes sensory information. The study reports, "When it (the fruit fly) first notices an approaching threat, a fly's body might be in any sort of posture depending on what it was doing at the time, like grooming, feeding, walking or courting. The fly somehow 'knows' whether it needs to make large or small postural changes to reach the correct pre-flight posture."

The researchers offer advice on how to swat a fly based on their findings. They advise aiming the swatter to land a bit forward in anticipation of where the fly is going to jump when it sees the swatter.

Fruit flies, it seems, follow the philosophy of hockey great Wayne Gretzky who said, "Great players go where the puck is going to be, not where it was."

*Fruit flies, it seems, follow the philosophy of hockey great Wayne Gretzky*



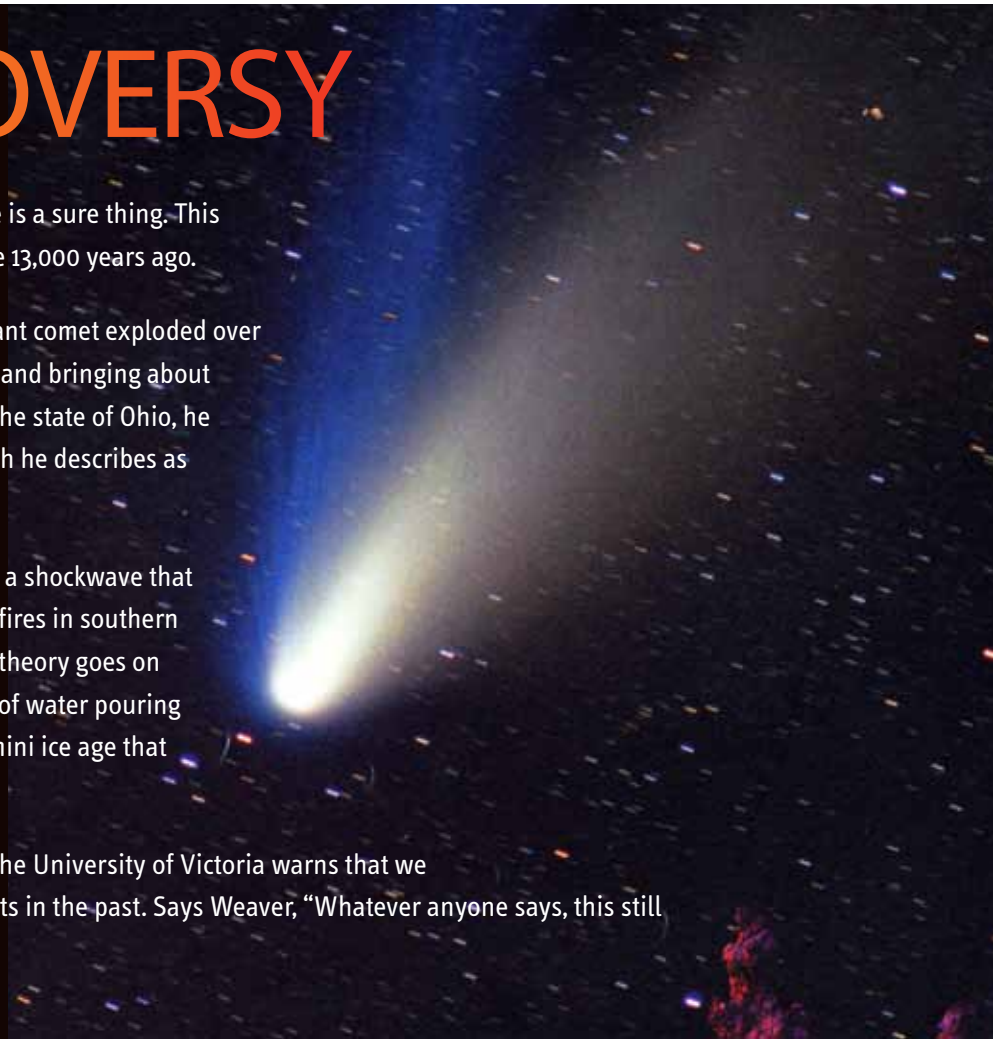
# BLAZING CONTROVERSY

Certainty about the past is a dubious proposition, while certainty about the future is a sure thing. This contradiction seems to be at the heart of a dispute on what caused climate change 13,000 years ago.

An anthropologist at the University of Cincinnati, Ken Tankersley, claims that a giant comet exploded over modern-day Canada 13,000 years ago, scorching the forests, changing the climate and bringing about the extinction of animals such as the woolly mammoth. Investigating two sites in the state of Ohio, he claims to have discovered an abundance of what are called micrometeorites, which he describes as "the fingerprint" of the giant comet that hit Canada.

According to the theory, a massive comet hit Canada 12,900 years ago and created a shockwave that sent millions of tons of heat, debris and gas into the atmosphere. Resulting grass fires in southern North America destroyed the grazing lands of mammoths and other animals. The theory goes on to state that the comet blast destabilized the ice sheet in Canada, sending a flood of water pouring into the North Atlantic. It suggests that this caused an abrupt cooling, creating a mini ice age that lasted for more than 1,000 years.

One of Canada's leading climate change academics, Professor Andrew Weaver of the University of Victoria warns that we shouldn't be hasty about the causes and effects of climate change related to comets in the past. Says Weaver, "Whatever anyone says, this still remains rather controversial. This is certainly not the end."



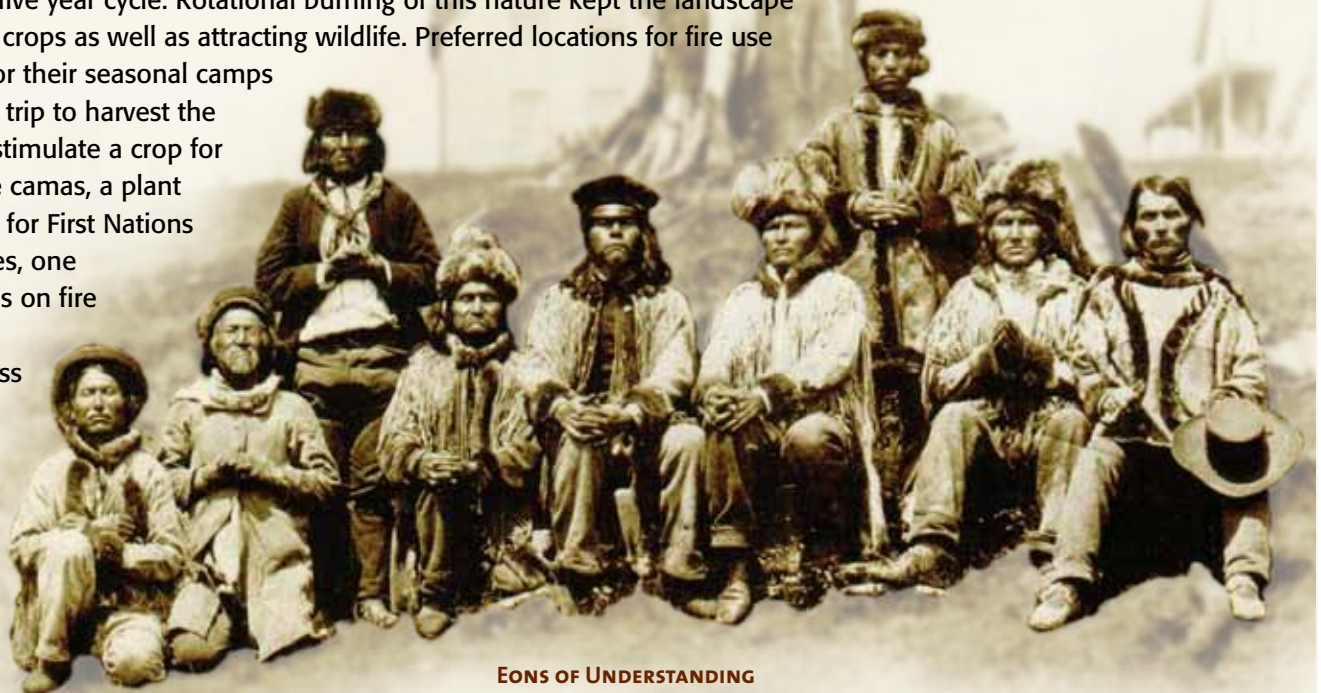
## THE FIRE CULTURE

For First Nations, fire was a tool in resource management and community sustainability. It was used to manage food and medicinal plants, create the habitat that would attract desirable wildlife and reduce the risk of fuel loading around communities.

Burning was done at times of the year when it would achieve intended results and it required knowledge of fire behaviour and vegetation response. At least 12 fruit bearing shrubs and six plants with edible roots were encouraged by traditional burning practices.

Certain areas were treated with fire on a four or five year cycle. Rotational burning of this nature kept the landscape area in constant production with desired natural crops as well as attracting wildlife. Preferred locations for fire use would have been close to First Nations' villages or their seasonal camps or could be far enough away to require a special trip to harvest the current year's crop and then carry out a burn to stimulate a crop for the following year. An example of this is the blue camas, a plant whose bulbs provided a source of carbohydrates for First Nations people on south Vancouver Island. On the prairies, one historian noted, "Indians...willfully set the prairies on fire in the autumn so that the bison would come to their part of the country to get the rich green grass that would follow in the spring."

In the northern boreal forests, spring burning kept meadows open while in the fur trapping areas, the fires of spring encouraged aspen and willow to support beaver and moose populations. (Acknowledgements: BC Forest Professional: John Parminter, Peter Murphy)



EONS OF UNDERSTANDING

## HISTORY GIVES A FREE RIDE

The industrialized western world employed many practices in the 19<sup>th</sup> century that are completely unacceptable today. These practices partially allowed western countries to gain economic dominance. They included child labour, slavery, and brutal labour conditions.

Nobody would argue that developing countries today should be able to use these horrific practices to catch up in economic terms, simply on the grounds that they were used by western countries in the past. There is one exception to that argument in the view of some countries. Many developing countries

*they should be allowed to grow their economies without any regard to climate impact*

insist that they should be allowed to grow their economies without any regard to climate impact, on the grounds that western societies were major polluters in the past.

In some cases, developing countries make the case that any significant action on improving their record should be paid for by western countries.

In India, for example, a government document entitled the "National Action Plan on Climate Change" stipulates that any actions in India to improve the climate should be paid for "by developed countries and the needed technologies (should

Continued on page 16...

## SMALL IS NOT THE NEW BIG

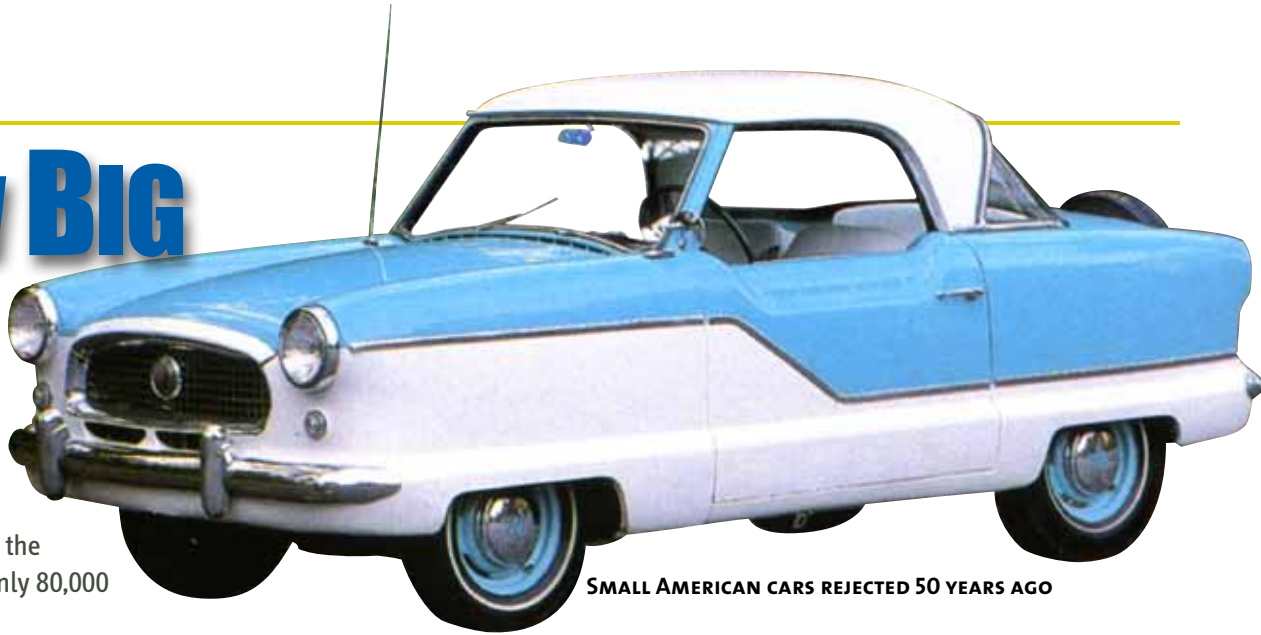
A frequent comment heard from media and other observers, with respect to the problems of the North American car industry, is that the industry failed to listen to consumer demand for smaller cars. However, the hard numbers of car sales don't support that mythical demand.

According to DesRosiers Automotive Consulting, the lead research agency on car sales in the US, sales of entry level cars, defined as the smallest and cheapest cars, in the first half of 2008 increased by only 80,000 units or about one per cent of the 7.5 million cars sold.

The situation is little different in Canada. According to Stephen Beatty, Managing Director of Toyota Canada, "We didn't suddenly become Europe or Japan." He added that, "it's not about everybody driving a subcompact going forward." He commented that North Americans have not changed their buying behaviour as radically as some people may believe.

*"We didn't suddenly become Europe or Japan."*

According to Dennis DesRosiers, "The absolute most common message we get day in and day out in the auto sector is that in the face of high gas prices the American consumer has abandoned the SUV and the pickup truck. The facts tell a different story."



SMALL AMERICAN CARS REJECTED 50 YEARS AGO

## WORLD OF WHEELS

According to the president of Toyota Motor Corporation, the number of cars in the world will hit one billion by 2015. By that time, he says that Toyota will be producing one million Prius models per year, which translates into one tenth of one per cent of the cars sold in 2015.

- There are currently 650 million cars worldwide.
- The hybrid has been around in one form or another for a century.
- In 1899, a car was developed in Austria that had a gasoline engine with small electric motors in the wheels.
- In 1917, in Chicago, a car called the Woods Dual Power was built combining a gas engine with an electric motor.
- In 1969, General Motors developed a small car called the XP-883 which had a small gas engine with an electric motor. It was also a plug in similar to the car which General Motors is trying to bring into production for next year.

In 1969, tiny hybrid cars with plug in features were not high on the consumer shopping list.

*hybrid has been around in one form or another for a century*

## PUMPED ON AIR POWER

A European company, MDI, has developed a concept for a car it claims will run on air. A New York firm called Zero Pollution Motors has obtained the license for US distribution of the cars and plans to deliver the first models next year at a price of \$20,000 Canadian.

*the required air pressure would be about 120 times the tire pressure of a typical six passenger sedan*

The concept of an air car is similar to a steam engine only in this case air replaces steam.

The vehicle planned for the US market would have a dual energy engine with speeds of 130 kilometres per hour and a range of 1,200 kilometres.

The design involves one or more tanks of compressed air under the floor of the car with a separate tank holding eight gallons of fuel. Depending on how fast the car is going, it would either use air or a combination of air and fuel. At speeds of less than 50 kilometres per hour, it is claimed that it would run on air power. The internal combustion engine used to heat the air could

*Continued on page 14...*

## PLASTIC PERSPECTIVES

The use of recycled plastic is credited with making cars more affordable and more environmentally friendly.

Recycled plastic is used for bumpers, splash guards and motor components. Because of its more brittle qualities, recycled plastic is mixed with new plastic in durable applications such as bumpers. It also costs half as much as new plastic to the manufacturer.

Even the plastic in cars that are demolished or sent for scrap finds a new life. The plastic is shredded and recycled into pellets that are used to make new automotive products.

A decrease in the availability of plastic is feared to lead to the need for more metal in cars, hence heavier vehicles with higher fuel requirements.

## RUNNING ON EMPTY STOMACHS

Rapidly increasing energy prices and security concerns combined to create an ethanol stampede over the last couple of years. Now with declining fuel prices and the impact of ethanol production on food, the ethanol stampede may be turning into an ethanol bubble. This is the view of a report on InvestorsObserver.com. A report on the site looked at the relationship between using food for fuel as opposed to food for diet.

The following numbers provided an illustration. The Mexican diet is comprised of 47 per cent corn. It takes 2.4 pounds of corn per day to feed a hungry person while it takes 22 pounds of corn to make one gallon of ethanol. There are 42 American gallons of gas in one barrel of oil.

Based on these numbers, to replace one barrel of oil would take 42 gallons of ethanol or 924 pounds of corn. That works out to be enough to feed a hungry person for 385 days, a little more than a year. Put another way, were a consumer to fill their tank with 22 gallons of ethanol that would be the equivalent of the food required by a poor person for six months.

*the Mexican diet is comprised of 47 per cent corn*

*Continued on page 14...*



## THE 9 LIVES OF CARS

The shiny new car you drive home may in fact be the genetic descendent of your neighbour's old jalopy. Cars are one of the most recycled commodities in the consumer marketplace.

One car company has cleverly presented its products as 70 per cent recyclable. In fact, steel and iron make up about 65 per cent of the average car and these valuable metals are completely recyclable. Every year in America, the steel industry recycles over 14 million tons from scrap vehicles.

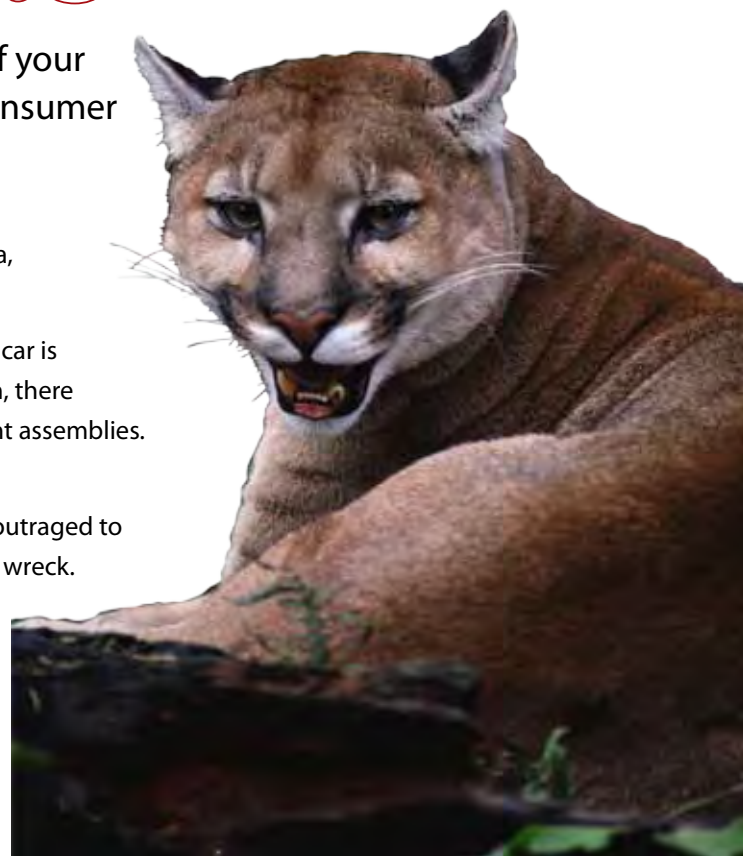
The scrappage process starts with drainage and removal. The average volume of operating fluids in a scrapped car is approximately 19 litres, all of which must be drained. These require disposal under local regulations. In addition, there are dangerous chemical components such as mercury switches which are found under the hood and in the light assemblies. These require careful extraction and disposal. Tires are recycled for a myriad of uses.

The next stage involves reuse. Many car parts can be dismantled and reused. In fact, new car owners are often outraged to find that their insurer has replaced damaged parts in their new car, after an accident, with parts plucked from a wreck. Reusable parts include the complete front and back assemblies, body panels such as doors and trunks, wheels, windows and windshields.

The next stage involves metal recovery. When the fluids and reusable items are removed from a vehicle, the car is crushed.

After it is flattened, another machine tears the body into small hand sized pieces of metal. The process takes about 45 seconds. It creates three streams of metals, iron, steel and non-ferrous metals such as aluminum. When the metals are sent off to manufacturing companies, what remains is called auto shredder residue or fluff. The fluff is sent to landfills and includes rubber, glass, wood products, cloth, foam, dirt and electrical wiring.

*new car owners are often outraged to find parts plucked from a wreck*



## SIZING UP A NEW MARKET

When General Motors officials first met with their Chinese counterparts to discuss selling cars in China, they were informed that the Chinese had an interest in Buicks. The GM representatives replied that Buicks were not in the company's long term plans. The Chinese replied that they really liked Buicks. Today there are more Buicks sold in China than in the United States.

The story reflects the strong preference that Chinese customers have for larger cars. A number of factors, from status to safety, are part of the reason. While SUVs in North America

have become synonymous with environmental treachery, sales of these types of vehicles increased in China last year by 43 per cent. Sales of full size sedans, which are difficult to move from North American lots, increased by 15 per cent.

In China, only four per cent of the population owns a car. This puts it on the same level as American car ownership in 1915. The four percent figure accounts for 15 million cars but surging growth of the middle class indicates that this figure will grow exponentially. If the love affair with larger cars persists, this will increase China's precarious dependence on foreign oil.

*there are more Buicks sold in China than in the United States*

The much reviled Hummer in North America is known as the Hanma, or "fierce horse", in China. So popular is the "fierce horse" that a copycat version has been released in China called the

Predator, which saw 15 dealerships spring up almost over night.

While the national average for car ownership is low, the figures are somewhat misleading when major urban centres are studied. In the manufacturing city of Dongguan, for example, there are 520 cars for every 1,000 residents.

The city has no local subway system, a shortage of buses and taxis and the inhabitants have no option other than cars for getting to work.

So car-dependent has the city become that last year

*much reviled Hummer in North America is known as the Hanma, or "fierce horse", in China*

## CAR TAX

China is increasing its tax on big cars to as high as 40 per cent, while cutting taxes on small vehicles as part of an attempt to combat emissions.

Vehicles with engines larger than four litres will have the tax doubled from 20 per cent to 40 per cent. Vehicles with engines between two and four litres will pay a 25 per cent tax, an increase of 15 per cent, while the sales tax for cars with engines of less than one litre will drop to three per cent.

the local government approached local banks to allow consumers to buy cars for no down payment. The city employees get subsidies for driving their

own cars to work, and parking garages were ordered, by the city, to reduce their rates by one half of those in nearby cities. The Chinese government faces the delicate task of balancing the need to sustain economic growth against public demands that the environmental consequences of such growth are minimized.

## PLUGGING INTO UTILITIES

The wheels will fall off the plug in car concept if owners drive across a provincial or state border and find no infrastructure to recharge their vehicles. That is why the General Motors Corporation is entering partnerships with three Canadian and over 30 American electrical utilities on a network that would allow the electric car concept to charge ahead. The Canadian utilities involved are BC Hydro, Manitoba Hydro, and Hydro Quebec.

General Motors is hoping to bring its electric car, the Volt, onto the

*creating an infrastructure for charging stations along super highways*

market by 2010. The Volt is designed to go 64 km on a single charge of electricity. In Tennessee, the Nissan Motor Company has established its North American headquarters and a partnership with the state's electric utilities aimed at creating an infrastructure for charging stations along super highways. Nissan plans to introduce electric cars for American fleets such as governments and corporations by 2010.

The partnership between General Motors and the 30-some utilities

*Continued on page 11...*

# SUSTAINABILITY— BEYOND SLOGANS

China is in the final stage of building its first eco cities—Dongtan and Wanzhuang. The goal is to have the cities produce their own energy from wind, solar power, biofuels and recycled city waste. Bike and foot paths will reduce the reliance on cars and the cities will contain small farms for local organically grown food.

The lead designer for the cities is Peter Head, a Director of the global planning firm, Arup, based in London. He dismisses the term “sustainable development” calling it “simply an expression of the desire to increase human development...within the environmental limits of the planet.” Instead, he believes modern urban planning should have very careful and measurable targets for social, economic and environmental outcomes. Calling sustainability a “confusing concept”, he supports a greater emphasis on long range quantifiable targets.

*modern urban planning should have very careful and measurable targets for social, economic and environmental outcomes*

In the case of the Chinese eco cities, the planning targets have a 30 year horizon with the objective of making sure that the cities will function economically “with good prosperity in 20 or 30 years time”. Planning for the cities incorporates researched projections for shortages in water, energy and materials three decades hence.

Part of the approach involves something called “cultural planning.” When starting a community planning project, the firm engages in a research study on the history of the community. In the case of Wanzhuang, they found that the local people had a history of dancing squares and other small cultural facilities in their communities. This concept has been included in the larger cities under development.

Asked about the sustainability issues facing major cities like Paris and New York, Peter Head avoids the short term jingoism that often turns urban sustainability into little more than an election platform. Instead he explains that “the problems of energy supply and energy use and security of that supply and the cost of it are the issues that make cities unsustainable at the moment.” He adds that in large cities the increasing gap between the rich and the poor is a major part of unstable living environments. This leads him to place economic development as the centre post of sustainable development.

*Chinese eco cities will function economically “with good prosperity in 20 or 30 years time”*

## GREENWASHING ENVIRONMENTAL FOOTPRINTS?

A paper from the Institute of Intergovernmental Relations at Queens University in Kingston poses some questions about the ownership of ecological footprints.

The paper approaches the question through the following examples. If Canada produces 100 barrels of oil and exports 60 barrels to another country

*consuming countries are held environmentally blameless*

that country is assigned the carbon footprint for using the 60 barrels. The footprint for the remaining 40 barrels used in Canada will be assigned to Canada. However, there is an extra allocation of carbon footprint responsibility

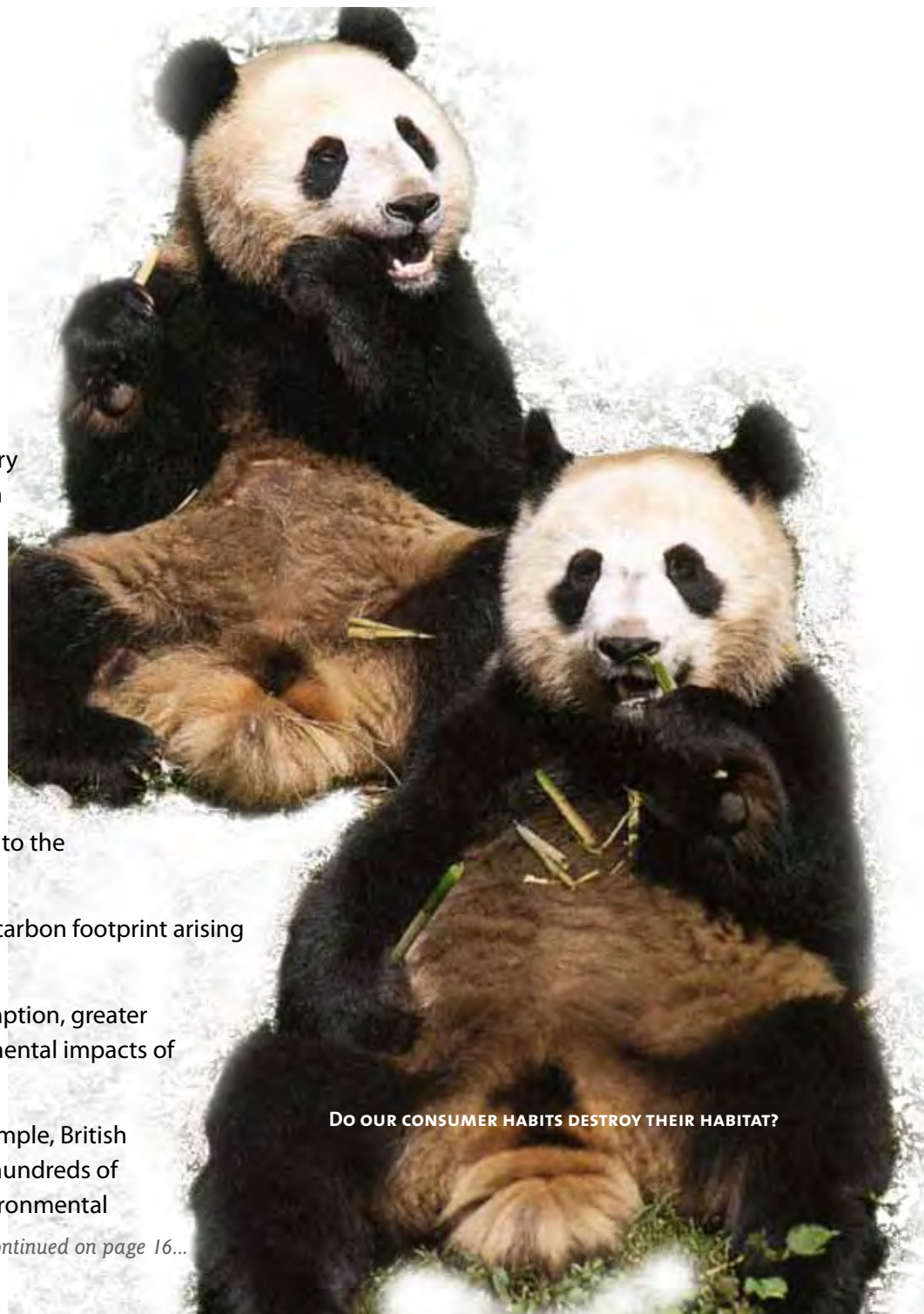
placed on Canada for its production of the entire 100 barrels. Under the current Kyoto Protocol, a country that imports all of its resources is only assigned a carbon footprint attributable to their consumption, whereas the carbon footprint for the production of the resources is assigned exclusively to the country that generated them.

In effect, consuming countries are held environmentally blameless for any carbon footprint arising from production of resources they consume.

The paper argues that since there would be no production without consumption, greater responsibility should be imposed on consuming countries for the environmental impacts of producing the resources they consume.

A similar double standard is at play for western countries. Currently, for example, British Columbia has a huge manufacturing trade deficit with China. BC brings in hundreds of millions of dollars of manufactured Chinese products annually but the environmental

Continued on page 16...



DO OUR CONSUMER HABITS DESTROY THEIR HABITAT?

## THINKGREEN, THINKBC GREEN GAMES

**D**o your students think green? Check out the BC Green Games, a new contest for K-12 students developed by Science World and the Ministry of Education. It's a chance for students to share and celebrate their success stories and be eligible to win—over \$50,000 in prize money will be awarded to BC schools.

To participate in the contest, students must not only think of eco-actions, they must actually take action and record those actions using creative media such as videos or photo-essays. Once submitted, the entries will be hosted on the BC Green Games website to inspire other teachers and students to take on their own eco-actions.

"The response we've received from teachers and students across the province is fantastic," says Pauline Finn, Vice President, Community Engagement, Science World.

"Students are full of great, creative ways to build a greener future for us and this is their chance to get their ideas out there to encourage other people to take action as well."

*Students are full of great, creative ways to build a greener future*

To date, over 100 projects are registered to participate in the contest from all across BC, including Port Hardy, the Kootenays, Fort St. John and the Lower Mainland.

Registrations will be accepted until November 30, 2008 and completed projects can be submitted January 15 - February 27, 2009. Once the projects start coming in, you'll be able to view them online to see what BC's young green thinkers have done.

More information, sample entries and contest details are available online at [www.bcgreengames.ca](http://www.bcgreengames.ca).

## A NEW TAKE ON TAKE OUT

In the face of rising prices for animal feed and fertilizer, Japan is responding to greater demand for animal feed pellets made from recycled leftovers.

Japan disposes of some 10 million tons of food waste a year. At one time, the leftovers were put in landfills for decomposition.

Since 2001 however, the government has pushed for a recycling industry to turn food scraps into animal feed or it sends leftovers to facilities where the methane gas produced by rotting foods powers industrial plants.

One former garbage truck driver started his own recycled food company when he became frustrated with dumping tons of food waste daily. Today, his trucks pick up rice balls, sandwiches and milk discarded from over one thousand 7-Eleven stores and bring them to a factory on the outskirts of Tokyo to be turned into animal feed for pigs and chickens. Japan's food industry is the biggest producer of food waste and recycles more than 70 per cent of its leftovers. About half is turned into feed. On the other hand, Japan imports about 75 per cent of its animal feed stocks and is the world's biggest corn

importer, to feed animals.

*student lunches could be providing heat and air conditioning*

This past year, the government of Tokyo commissioned a pilot project to produce methane and ethanol from leftover school meals. If successful, one day soon, student lunches could be providing heat and air conditioning for the same schools where they were eaten.

*Japan's food industry recycles more than 70 per cent of its leftovers*



## ZERO WASTE, ZERO CARBON

The United Arab Emirates plans to build the world's first zero waste zero carbon city and has formed a partnership with General Electric Company to advance the proposal.

Under the plan, a clean technology centre will be established in the Emirates Masdar city. The city will provide housing for 50,000 people and an environmental technology centre on four square miles of land set aside for the project. Planned for completion in 2015, the Masdar centre will be a walled city getting its energy from wind and sun and producing zero greenhouse gas emissions.

### PLUGGING INTO UTILITIES... *cont'd from page 9*

is examining issues of mutual benefit. On one hand, GM wants to see universal technical standards so that cars can move from one jurisdiction to another without being dead on the road. Utilities, on the other hand, are studying the impact that electric vehicles could one day have on their peak and off-peak power needs. The concept of 200,000 drivers plugging in their cars on a hot summer night in Toronto while the air conditioners are running has given pause to some electricity planners.

A recent study by the Massachusetts Institute of Technology projected that by 2016 there will be 10 million electric vehicles in the world, half of them in the United States. That will represent less than one per cent of the more than one billion vehicles that are expected to be on the road worldwide by that time.

## THE BURGER APOCALYPSE

A 400 page report from the United Nations Food and Agricultural Organization (FAO) states that 18 per cent of the world's greenhouse gases come from agriculture (except for Argentina where the percentage is estimated to be as high as 30). According to Vegan World, a publication of the vegetarian community, the eating habits of individuals are more of a threat to global warming than transportation. This publication argues that moving away from the standard American diet, which they shorten to SAD, and embracing a vegan diet is, "The single best thing you can do for your health and the health of the planet."

The publication goes on to suggest that by switching to a vegan diet, "Mankind will instantly eradicate nearly 20 per cent of the global warming problem." In addition,

*the eating habits of individuals are more of a threat to global warming than transportation*

*give up that hamburger in the interests of a cooler planet*

this will greatly curtail worldwide deforestation, top soil erosion and the poisoning of the world's waters. For individuals, it can fight high cholesterol, heart disease, hypertension, obesity, adult diabetes, kidney disease and many cancers." Vegans encourage people, if they believe the United Nations climate change pronouncements, to give up that hamburger and embrace vegetarianism in the interests of a cooler planet and a healthier body.



GLOBAL GORGING

## THE DIRT ON CLIMATE CHANGE

For the second time in two years, a report from NASA and the National Oceanic Atmospheric Administration (NOAA) makes the case that short-term pollutants,

*these pollutants will eventually add up to 20 per cent of the predicted summer warming in North America*

particularly from Asia, are a major contributor to global warming. The previous study suggested that wind storms, such as those that devastated Vancouver's Stanley

Park last year, were an outcome of Asian pollution. (Landscapes, Winter 2007)

The study found that smog, soot and similar particles, often seen hanging over cities like Beijing, contribute to global warming and may raise summer temperatures in North America by three degrees in 50 years. The short-term pollutants which come mostly from burning wood, kerosene, as well as driving trucks and cars, are the cause of the problem. The report also finds that the burning of biofuels in Asia, such as wood and animal dung, is a factor.

*Asian pollution is currently a big blob in the middle of the country*

The authors project that these pollutants from Asia will eventually add up to 20 per cent of the predicted summer warming in North America by 2060. The study forecasts that three hot spots will be created in the world including the central United States, Mediterranean Europe, and the border areas between Russia and China. According to the co-author of the report, Hiram Levy, a senior scientist at NOAA, Asian pollution is currently "a big blob in the middle of the country stretching from the Rocky Mountains to Pennsylvania."

Looking at American produced pollution, the report says that smog remains the major problem. It calls for a reduction in diesel emissions, and for an increase in mass transit as a more effective and immediate strategy rather than limiting power plants.

While soot and other similar pollutants are only visible for days, man-made methane is a greenhouse gas which lasts 10 years and, according to the Climate Institute of Washington, a strategy is needed to cope with this problem. In addition to the cows, which have become the popular culprit in the methane problem, sewage treatment plants and coal mining are major contributors.

## RUBBER DUCK RESEARCH

**Scientists from NASA used rubber ducks, during the summer, to find out why Greenland's fastest moving glacier, the Jakobshaven Glacier, is on the move.**

The researchers dropped 90 rubber ducks into holes in the glacier to gain a better understanding of why it picked up speed during the summer months. One theory is that the summer sun melts the ice on the glacier's surface, which in turn creates pools of water which then flow into narrow shafts in the glacier. The water

*thought to be the source of the iceberg that sank the Titanic*

then goes from the top to the base of the glacier where it acts as a lubricant to accelerate the glacier's move towards the sea.

The Jakobshaven Glacier is responsible for seven per cent of all the ice leaving Greenland. It is thought to be the source of the iceberg that sank the Titanic.

This is not the first time that rubber ducks have played a leading role in research. In 1992, thousands of rubber ducks fell into the sea when a ship bound from China to Seattle lost its load in the Pacific Ocean. Over the years the ducks washed up around the world and filled gaps in understanding of oceanographers with respect to ocean currents.

Landscapes magazine and other FORED information programs promoting environmental conservation and community sustainability are supported in part through proceeds from our charitable gaming license. Working in partnership with First Nations, youth, business, government, labour and other organizations, FORED programs directly benefit communities throughout BC.



## IN CASE OF BROKEN BULB GRAB FIVE PLASTIC BAGS

The U.S. Environmental Protection Agency has issued a set of instructions detailing what home owners should do in the event that a compact florescent bulb, which contains mercury, breaks in their home. The warning, updated in the Fall of 2008, contains a list of dos and don'ts to be followed when the mercury bulb hits the floor.

Among the don'ts are the following:

- Never use a vacuum cleaner. The vacuum could put mercury into the air and increase exposure.
- Never use a broom for cleaning, as it could break the mercury into smaller particles.
- Never pour the breakage down a drain as it may lodge in the plumbing.
- Never wash clothing or other items that have come into direct contact with mercury in a washing machine because the mercury may contaminate the machine and pollute sewers.
- Never walk around if your shoes may contain fragments contaminated with mercury.

*Have children and pets leave the room*

The advisory then goes on to list things that can be done if a compact fluorescent bulb breaks.

Before clean up:

- Open a window and leave the room for 15 minutes or more as well as shut off the heating and air conditioning. These procedures should be followed regardless of weather conditions.
- Have children and pets leave the room.
- Don't let anyone, including pets, walk through the breakage area on their way out.

Cleanup steps for hard surfaces

- The glass pieces and powder should be carefully scooped up using stiff paper or cardboard and placed in a sealed plastic bag.
- Use sticky tape to pick up any remaining small glass fragments or powder.
- The area should be wiped clean with damp paper towels or disposable wet wipes.
- These should be placed in a sealed plastic bag for disposal.
- A vacuum cleaner or a broom should not be used on hard surfaces.

SOMETHING TO DO WHILE THE WINDOW IS OPEN

Cleanup steps for carpeting or rug.

- Carefully pick up glass fragments using a rubber glove and place them in a sealed plastic bag.
- Use sticky tape to pick up any remaining small glass fragments or powder.
- If vacuuming is needed, remove the vacuum bag and place it in a sealed plastic bag for disposal.
- For the next several times the homeowner vacuums, shut off the heat and air conditioning and open the window for 15 minutes, again regardless of weather conditions.

*shut off the heat and open the window for 15 minutes, regardless of weather conditions.*

Cleanup steps for clothing, bedding or other soft materials.

- If clothing or bedding materials come in direct contact with broken glass or mercury-containing powder from inside the bulb, throw it away.
- If shoes come into direct contact with broken glass or mercury-containing powder from the bulb, wipe them off with damp paper towels and place the towels in a plastic bag for disposal.

Regarding disposal, check with local authorities with respect to regulations for the disposal of materials containing mercury.

A summary of these precautions would suggest that if homeowners are going to experience broken fluorescent bulbs, they would be wisest to have this occur during mild weather, wear their most disposable clothes during clean up, train pets on safe exit procedures and keep a stock of plastic bags handy.

## LOFTY SCIENCE

In a never ending quest to understand global warming, Argentine scientists are strapping plastic balloons to the backs of cows in order to collect their burps. The study aims to acquire a deeper understanding of how the slow digestive system of cows makes them prolific producers of methane.

*deeper understanding of the slow digestive system of cows*

Researchers attach a large plastic bladder to the cow's back and connect it through a tube to the cow's stomach, which allows them to "trap bovine burps and analyze them."

Researchers at the National Institute of Agricultural Technology conclude that as much as 30 per cent of Argentina's total greenhouse gas emissions could be generated by cows. They were surprised to learn that a cow weighing 550 kilograms could produce 1,000 litres of emissions each day.

With 55 million cattle grazing through the length of Argentina, tens of millions of red balloons would be required to trap the output.

*millions of red balloons would be required to trap the output.*

Methane is 23 times more potent than carbon dioxide in terms of trapping heat in the upper atmosphere.



WELL, EXCUSE ME!

## COMMUNITY CHAMPIONS

### First Nations communities face distinctive challenges in terms of developing wildfire protection plans.

Unlike larger urban centers, these small communities generally lack the fire protection infrastructure to mount a vigorous defence in the event of spontaneous wildfires. Compounding this is the fact that mature forests surround many First Nations communities, including those that live in the pine beetle zone.

#### *The Ministry of Forests and Range secured an opportunity for FORED to stage a workshop*

But there is much of a preventative nature that can be done to safeguard First Nations communities. This was the impetus behind a workshop conducted by FORED on behalf of The Ministry of Forests and Range in Prince George.

Attendees at the workshop came from a number of First Nations communities in the region and are part of a retraining program sponsored by the First Nations Forestry Council. The program aims to work in partnership with First Nation communities to provide delivery of contemporary fire safety and prevention information and knowledge to the community members and administrations. The Ministry of Forests and Range secured an opportunity for FORED to stage a workshop for enrollees in this program based on the Ministry's FireSmart program.

The session started with a screening of the video "In Our Defence" which tells how the community of Logan Lake developed a comprehensive strategy to protect itself from wildfires by using the FireSmart program principles. The video shows how the entire community, from businesses to students, can be contributors to a successful strategy.

A following roundtable discussion involved participants in assessing how the approach taken in Logan Lake could be applied in a First Nations community.

Mike Dittaro, Fuel Management Specialist for the Ministry in the Prince George area gave a detailed presentation on the FireSmart program. It provided a thorough understanding of the technical aspects of fire protection in every day language.

An unstated goal of the workshop was to engender enthusiasm among the participants to become FireSmart champions in their communities. There was unanimous and energetic response to that goal. One participant, expressing the mood of the group said, "I want to get started today."

FORED created a number of communication tools specifically designed for First Nations to help engage community interest in applying FireSmart principles in a First Nations setting. The kits included materials on career opportunities for First Nations related to community wildfire protection.

## ABORIGINAL ENVIRONMENTAL CAREERS

**FORED is part of a national focus group of First Nations and non First Nations representatives hosted by an organization called Building Environmental Aboriginal Human Resources (BEAHR). The purpose of the group is to develop and codify the competencies required for a generic solid waste management job that would be applicable in a Band office environment.**

The group intends to produce a list of national occupational standards required for an Aboriginal person occupying such a solid waste management job. Curriculum will be developed to train Aboriginal people for these positions.

The initiative is undertaken in response to demand from Aboriginal communities and the group plans to complete the curriculum in early 2009. Once completed, the program will be delivered to Aboriginal communities across Canada and is intended to increase Aboriginal employment in the growing environmental sector.

*Curriculum will be developed to train Aboriginal people for these positions*

## SUSTAINABILITY REPORTS

FORED serves as part of a stakeholder consultation group to advise the Vancouver Organizing Committee for the Olympic Games on sustainability reports. The purpose of the advisory process is to help ensure that VANOC's annual Sustainability Reports are valuable and timely tools to promote accountability to stakeholders regarding VANOC's sustainability commitments.

## FIRST NATIONS SCHOLARSHIP

FORED provides a scholarship opportunity to all students of self-declared aboriginal ancestry in the Nicola Valley Institute of Technology (NVIT) Natural Resources programs. The scholarship connects natural resource studies and traditional knowledge.

To apply, students provide an outline to describe how traditional knowledge may be or has been applied to natural resources management in their territory, community or Band decision-making. This can be an oral story/family anecdote, traditional practice, research, or other, as long as it relates to any aspect of the environment or natural resources practices in fisheries, wildlife, mining, forestry, agriculture, oil and gas, archaeology, parks, recreation/tourism or other topics in support of their application.

Winners are selected based on the best submission as judged by NVIT staff, financial need and the highest grades in the NVIT Ethno Science courses.

The scholarship can be used to support any post-secondary related costs (tuition, books, living expenses etc.).

Award winners will be published in FORED magazine Landscapes. All applications submitted by students may also be published in the FORED magazine Landscapes or in a future publication depending on funding.

The scholarship will be awarded to an aboriginal student selected by NVIT with the cheque presented by FORED at the award ceremony in May at which time photos will also be taken for publication.

FORED hopes to acquire additional donors and one day establish an endowment for this purpose and publish a memory book on traditional knowledge to preserve this history for future students.

*students describe how traditional knowledge may be or has been applied to natural resources management*

## COMMUNITY SERVICE RECOGNIZED

FORED was formally recognized by the City of Vancouver and its Youth Outreach Team for its outstanding contribution to the youth community in Vancouver.

FORED President Cheryl Ziola received the honour on behalf of FORED at an award dinner.

## RUNNING ON EMPTY... *cont'd from page 8*

In any energy price scenario there seems to be a cloud of controversy. High energy costs drive producers to explore alternative sources which may create problems in terms of world hunger. Low energy costs may drive consumers to the indiscriminate use of private transportation with its attendant environmental consequences.

## PUMPED ON AIR POWER... *cont'd from page 8*

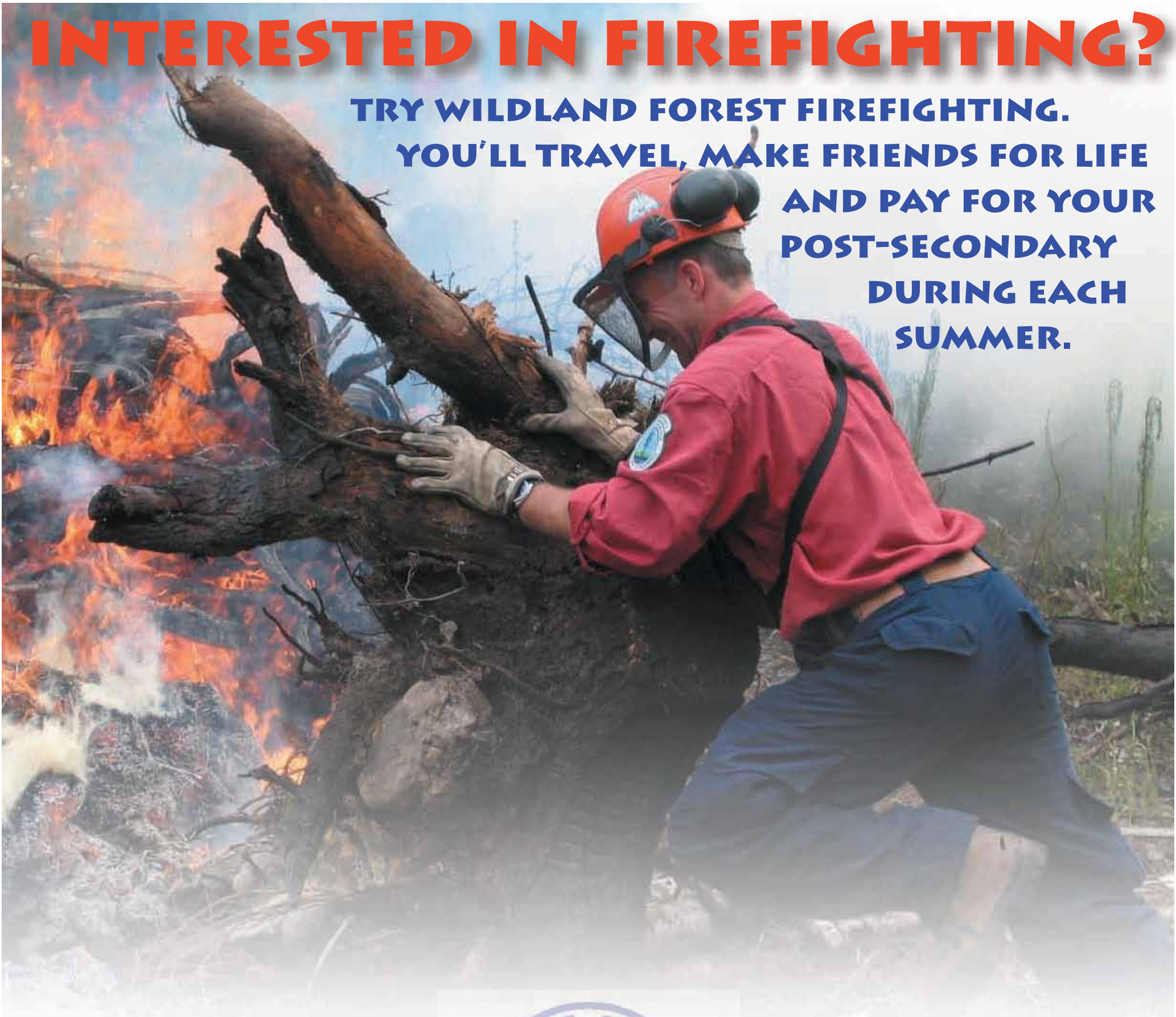
run on gasoline, biofuels or a combination. With claims that the car could deliver over 100 miles per gallon, the promoters see it as a strong competitor for hybrid vehicles. Some skeptics have pointed out that the required air pressure would be 4,500 pounds per square inch or about 120 times the tire pressure of a typical six passenger sedan. They claim that the amount of energy required to produce that type of pressure would make the car non-competitive.

The largest car company in India, Tata Motors, entered an agreement with MDI to develop the technology. Tata is currently producing a car for the Indian consumer that sells in the range of US \$3,000.

# **INTERESTED IN FIREFIGHTING?**

**TRY WILDLAND FOREST FIREFIGHTING.**

**YOU'LL TRAVEL, MAKE FRIENDS FOR LIFE  
AND PAY FOR YOUR  
POST-SECONDARY  
DURING EACH  
SUMMER.**



- Candidates should be physically fit & have some labour/outdoor experiences
- must have Occupational First Aid Level 1 & Transportation Endorsement certificates by hiring date
- some post-secondary in natural resources an asset

**FOR INFORMATION AND ON-LINE ONLY APPLICATION:**

**<http://bcwildfire.ca/Employment/FireFighter/>**

**Application deadline: January 31, 2009**

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## FOOTNOTES

FORED manages a program called Youth Engaging Sustainability (YES) which involves, in part, seeking the opinion of students on sustainability challenges and thereby encouraging their participation in community solutions.

**About 38 per cent of the respondents get to school by car**

As part of this, over the past year, FORED conducted a lifestyle survey to stimulate youth thinking about their contribution to Canada's ecological footprint. The following are the findings.

About 30 per cent of the respondents reported consuming more than 10 meals of meat or fish in a week, while slightly more reported consuming four to six meals of

meat or fish. Whereas national data point to as much as 50 per cent of meals being consumed outside the home, in this group 38 per cent said that they ate more than 18 out of 21 meals per week of home cooked food. While 30 per cent reported that their family tried to buy locally produced food, an almost equal number said that they didn't know where the family's food purchases originated.

Turning to transportation, 11 per cent reported that the family drove a small compact, 49 per cent said the family vehicle was mid sized, while 36 per cent said it was a full sized SUV or pickup truck. About 38 per cent of the respondents get to school by car, more than the 32 per cent that use public transit. About ten per cent reported making two transit trips a day, with 25 per cent indicating they never use transit.

In terms of vacations, 62 per cent reported that their summer vacations were taken either in United States or outside of North America, and eight per cent reported having enjoyed a BC vacation. A full 19 per cent did not take a summer vacation. About 49 per cent reported enjoying a family weekend at the cottage by car during the summer.

Respondents were evenly divided on composting. About 38 per cent said their family composted sometimes. An equal number said the family used composting rarely or never, while 24 per cent said their family always composted. Newspaper recycling was reported by 75 per cent of the families while eight per cent said they never recycled newspapers. Close to 60 per cent of the students said that their family filled two or more garbage bags per week, while 30 per cent said their family used one garbage bag.

**eight per cent reported having enjoyed a BC vacation**



### HISTORY GIVES... *cont'd from page 7*

be) transferred." The Action Plan goes on to challenge the very notion being put forward by the United Nations that there is a link between mankind's activities and a warming climate. The Plan describes the relationship between human activity and climate change as having "no firm link."

The National Action Plan was chaired by the Prime Minister of India and prepared by the Prime Minister's Advisory Council.

The Chairman of the United Nations Intergovernmental Panel on Climate Change is India's Rajendra Pachauri. When asked to explain the gap between the United Nations Climate Panel's recommendations and India's National Action Plan, his comment was that western critics should "get off the back of India."

### GREENWASHING FOOTPRINTS... *cont'd from page 8*

cost of producing those products is ascribed exclusively to China. Some will argue that part of the negative environmental consequences of products produced in developing countries and consumed in British Columbia should be on BC's environmental ledger.

The authors contend that if countries consuming resources were made more accountable for the carbon costs for the production of these resources it would benefit the global environment. These countries would be more likely to obtain their natural resources from countries with high environmental standards instead of scouring the world for resources from third world countries that lack them completely.

For Canada, a country with an economy disproportionately based on resource development, they argue that some rational balance of the carbon footprint

allocations is in the national interest.

In an era where products like the new Boeing airplane and the Apple i-Phone are produced in several countries simultaneously, they propose the institution of a multinational carbon tax that would be imposed on every country participating in each stage of a product's manufacture.

The authors conclude that without some balance being brought to the current formula, resource dependent countries like Canada will be both beneficiaries and victims of the rising demand from developing economies.

### COOPERATION FOR ... *cont'd from page 4*

This past year, the Great Lakes Compact was approved between Canada and the US as a final step to strengthen legal protection for the use of water from the five Great Lakes, their channels and the St. Lawrence River. It received support from all political parties on both sides of the border as well environmental and business groups. The pact bans new diversions of water to places outside of the eight states and two Canadian provinces that border the Great Lakes and St. Lawrence basin.

Opposition to the export of Great Lakes' water did not originate from fear of America's appetite for water. In fact, in the 1990s, an Ontario consulting firm proposed to ship 160 million gallons of water from Lake Superior to Asia and that move sparked negotiations between the two countries to stop such projects. With the United Nations forecasting that in less than 20 years, two-thirds of the world's population will lack ready access to clean fresh water, and the birth of trade agreements between North America and other jurisdictions, today's legislators feel there is a compelling need to place protection around this vital water supply.

### DRY RUN FOR DISASTER... *cont'd from page 3*

Some short-term solutions are proposed to address the problem. One of these is better water storage capacity. For example, Ethiopia, like many sub-Saharan African countries, has water storage capacity of about 38 cubic metres per person. By comparison, Australia has a storage capacity for 5,000 cubic metres per person and this is considered inadequate. Other measures such as building small reservoirs or creating rain water trapping systems for small farm gardens are seen as partial solutions.

The larger solutions, according to the Institute, involve a combination of investment and science. The investment involves creating the infrastructure facilities to get water to people and the science component involves developing drought-tolerant crops.