

THE LIVING PLANET



Preface

I have an intention to write something about vegetarianism since some years ago. However, there are plenty of resources on this topic already. Therefore, it isn't my purpose to tell you why you should or how you should become a vegetarian here.

Rather, I would like to present some articles - press releases or publication from various sources collected over past couple of year — to highlight what is happening now in our environment, in the hope the readers be more alert and care about our planet. In addition, I would like is to invoke your thoughts on how vegetarianism may contribute to solving environmental problems such as global warming.

I selected the most interesting articles from my personal archives, and tried the best to avoid overlapping topics. Most of the articles are shorten – some even cut down by half – in order to present the materials in most exciting manner. If you have any comment, or suggestion, you can reach me at ccchai97@yahoo.com.

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308,000 Whales, Dolphins and Porpoises Killed in Fishing Gear Annually, New Study Shows

Washington - Nearly 1,000 whales, dolphins and porpoises (classified scientifically as cetaceans) drown every day when they become entangled in fishing gear, according to a new study submitted to the International Whaling Commission (IWC). Researchers from the United States and United Kingdom estimate that approximately 308,000 cetaceans are unintentionally drowned this way each year.

The research, conducted at the Duke University Marine Laboratory and the University of St. Andrews in Scotland, is the first global estimate ever done of cetacean deaths from entanglement in fishing gear, also known as bycatch. Scientists believe that death in fishing gear is the leading threat to the survival of the world's 80-plus species of whales, dolphins and porpoises.

"This level of bycatch is no doubt significantly depleting and disrupting many populations of whales, dolphins and porpoises," said lead researcher Andy Read of Duke University, who is co-chair of World Wildlife Fund's Cetacean Bycatch Task Force. "Several species will be lost in the next few decades if nothing is done."

Unintentional death of whales and dolphins in fishing gear is pushing some cetacean species to the brink of extinction. In Mexico's Gulf of California, for example, up to 15 percent of the critically endangered vaquita population is killed every year in fishing nets. With a population of only around 500, the small porpoise found nowhere else on Earth - is being decimated by bycatch. Whales and dolphins can become entangled in commonly used fishing gear like gillnets, tangle nets, trammel nets, trawl nets and long lines.

Formed last year, WWF's International Cetacean Bycatch Task Force includes 27 leading bycatch experts from 6 continents. The group works closely with WWF to solve the global bycatch problem, including conducting research and training in places with the most severe bycatch problems, working with fishermen to find more cetacean-safe ways of fishing, and pushing for more attention and resources for reducing bycatch of whales, dolphins and porpoises in international policy arenas such as the United Nations Food & Agriculture Organization.

New Animal Brain Disease Reported

LONDON, June 14 (UPI) -- Britain is taking steps to advise people about an animal brain disease affecting sheep that may pose a risk to humans.

The public has been told to avoid mutton, goat and some sausages, reports The Times of London. The country's Food Standard Agency says it cannot rule out the risk to human health.

The disease is reported to be similar to classic scrapie, a brain-wasting disease that has been known in sheep for more than 100 years but which until now has not raised concerns for humans.

The agency said it is updating guidance to shoppers because it does not know whether atypical scrapie can affect health.

It also plans to ask the European Commission for the immediate introduction of new labeling rules to identify products containing mutton.

MDLR to Position Itself as India's First Vegetarian Airline

Gurgaon-based MDLR group's soon to be launched passenger airline, MDLR Airlines, will be marketing itself as India's first pure vegetarian airline.

Headed by the group's chairman Gopal Kumar Goyal, the airline promises to provide a wide variety of multicuisine vegetarian specialties. According to a company source, the decision to go pure vegetarian was a company decision and was driven by the forerunners of the MDLR Group.

The airline aims to connect two-tier cities in India with the metros and its first roll-out is scheduled to take place in early May 2007. It will start operations from Chandigarh, New Delhi, Ranchi and Kolkata. During the second phase, it aims to enter cities like Mumbai, Goa, Surat and Bhavnagar. MDLR Airlines will position itself as a full-service carrier with fares starting from Rs 1,000.

April 2007, Express Travel World (www.expresstravelworld.com)

Veganism Good for the Planet

The www.direct.gov.uk/greenerfood website makes clear that eating meat and dairy products contributes to global warming because of the energy and land needed to rear animals. Sheep and cows also emit harmful methane gas.

Methane is one of the three 'greenhouse gases' thought to be the main source of the problem. 16% of methane caused by humans comes from farmed cattle. Production of plant foods uses less energy than production of animal-based foods, so contributes less to climate change.

Forests are being destroyed at an alarming rate - not just for wood, but also to provide land to graze cattle and to grow food for cattle. The United Nations Food and Agriculture Organisation estimates that total forest loss in the 1990s amounted to an area larger than Venezuela. Forests are home to millions of species, which can become endangered when they lose their habitats. Trees also absorb carbon dioxide, so fewer trees mean more global warming.

The new government website says that meat and cheese are among the worst for warming the planet,

"because of the way they are produced, packaged, transported or cooked". Although transport and housing get all the blame for heating up the planet, food production and preparation do just as much damage, accounting for 25 per cent of global warming. Flying accounts for just two per cent.

The Vegan Society also argue that: "Meat and dairy production is an inefficient use of land, food and water. It has been estimated that for every kilogram of meat protein produced, farmed animals are fed nearly 6kg of plant protein.

Livestock such as cattle and sheep use more than two thirds of agricultural land, and one third of the earth's total land area.

In a world where every year 6 million children under the age of 5 die as a result of hunger and malnutrition, the meat-intensive diets of the western world represent a tragic misuse of limited planetary resources."

February 4, 2007, Arkangel (www.arkangelweb.org)

KFC Exposed for Trashing the Amazon Rainforest for Buckets of Chicken

Santarem, International — Recent Greenpeace investigations (1) have traced the chain of rainforest destruction directly from the heart of the Amazon, via Cargill's facility [Note: Cargill is US commodities giant, which supplies KFC with animal feed in Europe], to KFC's European restaurants (2), which sell bucket-loads of cheap soya-fed chicken to millions of people every day.

"Deforestation, slavery, use of toxic chemicals, land theft, illegal farming and the extinction of rare species are a recipe for disaster in the Amazon rainforest, but they are ingredients in KFC's quest for cheap animal feed," said Greenpeace International Forest Campaign Coordinator Gavin Edwards. "Fast food companies like KFC must take Amazon deforestation off their menu before it is too late for the world's greatest rainforest."

The Amazon rainforest is being destroyed at an alarming rate and is in urgent need of protection. Since January 2003, nearly 70,000 km² has been destroyed, equivalent to an area of rainforest the size of 6 football

pitches every minute. Soya, which is mainly grown to feed animals, is a leading cause of this destruction. A report last month in Nature magazine (3) revealed that 40% of the Amazon will be lost by 2050 if current trends in agricultural expansion continue, threatening bio-diversity and massively contributing to climate change.

KFC is part of Yum! Brands, Inc., the world's largest restaurant chain which includes Pizza Hut, Taco Bell, A&W and other fast food companies. Greenpeace recently wrote to Yum! Brands, Inc. regarding the destruction of the Amazon, but the company claimed its soya is grown in other parts of Brazil. Yet Greenpeace has traced its supply chain and found that some comes from facilities that use soya grown in the Amazon rainforest.

Greenpeace is calling on KFC and Cargill to ensure that the animal feed they buy does not contribute to the destruction of the Amazon and that none of their soya products are genetically engineered.

Factory Farming a Major Threat to Human Health

The animal campaign group Viva has today issued a stark warning that factory farming promotes conditions that ensure that H5N1 bird flu virus will never be detected until the virus is well established. For three years in succession, the group has carried out undercover investigations at Bernard Matthews intensive turkey sheds in Norfolk.

Viva has issued the warning as 159,000 turkeys are being slaughtered on a Bernard Matthews factory farm in Suffolk due to the fact that a number of birds have died from H5N1 bird flu virus.

The practice of selectively breeding one type of bird for weight gain has produced genetically weakened animals. Viva claim that the overcrowded, windowless sheds in which they are forced to live ensures any new pathogen spreads like wildfire.

"Most factory farmed turkeys can only be kept alive by the daily use of antibiotics in their feed and water," says Justin Kerswell, campaigns manager, "and yet still there is a death toll of up to 10 per cent. This means that in a shed of 25,000 birds, dozens die every day and no one will show any concern until the whole flock starts to perish. By this time, the virus could have been spread widely by workers. But even worse, our investigations have shown that in the overcrowded conditions dead birds may not be removed and can be left to rot where they die."

"They have played a major part in the development of hospital superbugs and antibiotic strains of E. coli and salmonella and the endless supply of cheap meat from factory farming is central to the growing epidemics of heart disease, cancer and obesity. If H5N1 is going to mutate into a human to human virus, it is inside sheds such as those at Bernard Matthews that it is likely to originate."

Viva argues that there are many free-range poultry farms in Suffolk and Norfolk and it is inconceivable that migratory birds are the cause of the current outbreak. It believes it is no coincidence that the South East Asian countries where H5N1 is much more common are those with intensive poultry industries, while those which have not developed factory farming have largely been spared from the disease.

New Zealand Chicken Farming Sick, Human Health at Risk

Warnings that antibiotics routinely fed to intensively farmed animals can breed super bugs resistant to human medicine, have once again hit the news. On 60 Minutes last night, John Aitken, a Christchurch microbiologist, warned that the continued practice of indiscriminate feeding of antibiotics to animals could lead to major public health problems.

What the program did not make clear is that one of the biggest culprits of this practice is the broiler chicken industry. In New Zealand over 80 million chickens are raised in factory farms. They are fed antibiotics to force faster growth and prevent widespread disease break out, caused by the overcrowded, unsanitary and stressful conditions the animals are kept under.

New Zealand's broiler chickens are reared inside large, fully automated, windowless sheds. Up to 20,000 chickens are housed in each shed, packed in tightly at 20 birds per square metre. Selective breeding for fast growth, combined with a daily dose of growth-promoting antibiotics sees broiler chickens reach their slaughter weight in just 38 days. This abnormal growth places enormous stress on the chicken's bones, heart

and lungs and can lead to bone deformities, leg weakness and disease. Consequently, around three million New Zealand broiler chickens die each year before they reach six weeks of age.

"It is clearly not possible to raise animals in these highly intensive systems without compromising the animal's welfare, and now it seems human welfare as well. With antibiotic resistance in humans becoming an increasing problem, action is required. The reckless use of these drugs not only continues, but is on the increase. The poultry industry alone increased its use of antibiotics by a staggering 34 percent over the last three years." says Hans Kriek, Campaign Director for SAFE, a national animal advocacy group.

"The time has come for New Zealand consumers to demand a change towards a more humane system of chicken farming that does not need to rely on the use of powerful drugs to keep its animals alive. Not to do so will have serious consequences for both animals and humans alike."

TORTURED, KILLED, DISCARDED International World Day for Laboratory Animals - 24 April

Anti-vivisectionists in Auckland and Christchurch will hold graphic remembrance ceremonies to commemorate the lives of New Zealand's 260,000 animals used for experimentation, on World Day for Laboratory Animals, Saturday 24 April.

"Public displays of 'dead' bodies, wrapped in bloodied white sheets will serve as a stark reminder of animals cruelly mutilated, abused and disposed of behind the closed doors of this country's laboratories," says Hans Kriek, Campaign Director of SAFE, New Zealand's oldest and largest animal rights organisation.

"Of the 260 000 animals used annually, half are killed, and thousands more are subjected to what the government describes as 'severe' or 'very severe' suffering. The type of experiments that fall in these categories range from major surgery without the use of anesthesia; recovery from third-degree burns or serious traumatic injuries, to lethal dose toxicity testing and the induction of psychotic-like behaviour leading to severe injury or death."

Most animal research in New Zealand is carried out for commercial reasons and is aimed at increasing the profits of the meat and dairy industries. Only a small percentage (11.5% in 2002) of laboratory animals is used in medical research. Preliminary figures obtained under the Official Information Act indicate that the year 2003 may see an increase in experimentation.

"Why do we as a country accept the burning, blinding, poisoning and surgical mutilation of tens of thousands of animals? Most of these experiments can only be described as torture for profit and this explains the shroud of secrecy that hangs over animal research in this country. Researchers are well aware that the public will not accept this abhorrent cruelty to animals and go to great lengths to cover up what happens to animals in New Zealand's laboratories," says Mr Kriek.

SAFE believes that the Animal Welfare Act fails to protect laboratory animals by allowing them to be used in experiments that cause severe and very severe suffering. SAFE will now actively lobby for law changes to stop animal research from being carried out in secret and seeks an immediate ban of experiments where animals endure severe or very severe suffering.

Doctor Has a Vegan Plan for Diabetes

Is it possible to reverse diabetes with diet alone? Dr. Neal Barnard, president of the Physicians Committee for Responsible Medicine, has shown that switching to a vegan diet can significantly control type 2 diabetes, and, as an added bonus, people lose weight while eating as much fruits, vegetables, beans and whole grains as they want. While the diet doesn't cure diabetes, it can reduce blood sugar to levels so low in some people that medicine is no longer needed.

Barnard's study, funded by a grant from the National Institutes of Health, compared a low-fat vegan diet with the standard diet prescribed by the American Diabetes Association, which allows low-fat meat, fish and dairy products. Neither group was given an exercise plan for the 22-week study because Barnard wanted to compare only the diets.

In type 2 diabetes, the body either does not produce enough insulin or the body's cells become resistant to it. Because insulin is necessary for the body to be able to use sugar or glucose - the basic fuel for cells in the body - glucose builds up in the blood and starts causing problems. The cells are starved for the energy they need for normal function, and over time, high blood

glucose levels can damage the eyes, kidneys, nerves and heart

The study found that both diets were effective, but the veggies won. People on the vegan diet lost more weight and improved their A1C levels - an average of blood glucose levels over a 3-year-period - by an average of 1.23 points, compared with the 0.38 on the ADA diet

Barnard said the obesity epidemic in this country is fueling a secondary epidemic of type 2 diabetes, which used to be called adult onset diabetes. But with obesity doubling in children and tripling in teens since the 1980s, type 2 diabetes is no longer considered just an adult problem. In 2005, the most recent year for which statistics are available, about 176,500 people age 20 and younger had been diagnosed with type 2.

That's a small number compared with about the 20.8 million of all ages who have diabetes, according to the federal Centers for Disease Control and Prevention, but indications are the youthful numbers are growing -- especially among American Indians, blacks and Hispanics, the CDC said.

Live-Fish Market Grows, Stripping Reefs

KOTA KINABALU, Malaysia - Appetite for live reef fish has caused the populations of these predators to plummet around Asia as fishermen increasingly resort to cyanide and dynamite to bring in the valuable catch. Entire reef ecosystems, already endangered by pollution and global warming, are at risk.

A study released Wednesday about the trade in Malaysia found that catches of some grouper species and the endangered Napoleon wrasse fell by as much as 99 percent between 1995 to 2003.

The U.N. and the World Conservation Union released a report last year warning that human exploitation of the high seas was putting many of its resources on the verge of extinction.

It noted that 52 percent of global fish stocks are overharvested and that populations of the largest fish such as tuna, cod and swordfish declined as much as 90 percent in the past century. The report also said destructive fishing practices - including bottom trawling, illegal longline fishing and an increase in large industrial vessels - have led to the deaths of tens of thousands of seabirds, turtles and other marine life.

"Well over 60 percent of the marine world and its rich diversity found beyond the limits of national jurisdiction is vulnerable and at increasing risk," Ibrahim Thaiw of the World Conservation Union said last year.

Reef fish - which are caught mostly by small fishermen who sometimes use cyanide poison to stun their catch - are prized mostly because they are cooked live. Traders are careful to ensure they arrive that way, packaging them in bags of water and placing them in coolers for trips that often stretch for thousands of miles.

In restaurants, diners can pay as much as \$50 a pound for the fish. Business dinners and weddings in Hong Kong and other Asian cities routinely serve live reef fish alongside such delicacies as shark-fin soup.

The World Wide Fund for Nature's Annadel Cabanban, who studies the trade in Malaysia, agreed with the study's finding that the numbers of reef fish were on the decline due to increasing demand. She said destructive fishing practices were as much to blame for

the decline as overfishing because they destroy crucial reef habitats

"There are no predators to check the fish that eat the plants and the shellfish," Cabanban said. "There is a cascading effect on the reef. With so many herbivores, the plant population declines and fish run out of food and they die."

Conservationists fear the growing demand for live fish - an industry worth more than \$1 billion a year -- is increasing pressure on coral reefs already threatened by warming oceans, development and pollution.

Eighty-eight percent of Southeast Asia's coral reefs face destruction from overfishing and pollution, the U.S.-based World Resources Institute estimates. Most threatened are reefs in the Philippines and Indonesia, home to 77 percent of the region's nearly 40,000 square miles of reefs.

Fishermen in Kudat -- a South China Sea port in Malaysia that depends almost entirely on fishing -- acknowledged that catches have declined. Their boats now travel to the Philippines for reef fish.

'Clothesline of Shame' Against Animal Testing

Procter & Gamble, one of the world's largest known animal testers of cosmetic and household products will have their 'dirty laundry' publicly exposed in central Auckland and Christchurch to highlight cruel experimental procedures performed on animals.

On Saturday, 22 May, New Zealand will join international protests against Procter & Gamble's crude animal-testing policy. Cruelty-free campaigners from SAFE will hang 'blood' splattered sheets on specially erected clotheslines while displaying messages against Procter & Gamble's product testing methods.

"SAFE's clotheslines of shame demonstrate to the public that companies who continue to conduct animal testing cannot hide their crude and painful procedures. Procter & Gamble subjects animals to harmful and often lethal experiments. An estimated 50 000 animals die at the hands of Procter & Gamble every year. A recent undercover investigation identified shocking experiments involving rats and dogs," says SAFE's Campaign Director Hans Kriek.

"In one case, over 400 young rats were either castrated or forced through premature puberty through sex hormone injections. The rats were repeatedly injected with gender-altering chemicals that shrunk their sex organs. After three weeks, all the animals were killed by neck dislocation, and their bodies and genitalia dismembered to be weighed and analysed."

It is understood Procter & Gamble has been under scrutiny from scientists who have criticized these kinds of tests, pointing to "major scientific problems" with interpreting the results, and noting "severe animal welfare concerns" due to "complicated procedures and repeated injections".

SAFE is calling on consumers to choose only cruelty-free products thereby not supporting cruel animal product testing.

"If consumers stop buying Procter & Gamble products then this company will have no choice other than to abandon its cruel animal-testing practices."

Illegal Killing of Whales and Dolphins in the Mediterranean Must End

Athens, International — Greenpeace today warned that the illegal killing of scores of whales and dolphins in the Mediterranean sea will continue until Mediterranean countries get serious about enforcing a long standing ban on illegal driftnet fishing in their sea. The environmental organisation demanded that Mediterranean countries properly manage their fisheries and finally commit to a network of marine reserves to protect the sea's fish stock from dying, Greenpeace said today.

"If people are horrified by the images of the whales being harpooned in the Southern Ocean , they'd be equally repulsed by the thousands of dolphins and other creatures that are being entangled and killed by fisherman using huge illegal driftnets each season in the Mediterranean," said Sofia Tsenikli of Greenpeace Greece aboard the Rainbow Warrior. "It's illegal, it's immoral and it's time it was stopped. A ban should mean a ban."

Greenpeace's flagship the Rainbow Warrior has spent the past three weeks on the high seas off the coasts of Greece and Italy confronting rogue fishing vessels and confiscating their driftnets, known as 'walls of death', up to 15km in length and 15m deep that are still being used to fish a dwindling stock of swordfish despite United Nations and European Union bans.

"The Mediterranean countries cannot have it both ways- bad management and overfishing have already wiped out 80% of the Mediterranean's tuna stock; the region's flagrant disregard for the driftnets ban that it signed up to, together with continuing mismanagement of the fisheries threaten to take swordfish and other species down the same path unless they take action to protect their sea immediately," said Alessandro Gianni of Greenpeace Italy. "Unfortunately, for every driftnet rounded up, countless vessels are still getting away with murder."

Greenpeace is calling on the Mediterranean countries to establish a network of Marine Reserves covering 40% of the Mediterranean sea. Elsewhere around the world marine reserves have increased the number of species and regenerated the fish populations.

'Only 50 Years Left' for Sea Fish

There will be virtually nothing left to fish from the seas by the middle of the century if current trends continue, according to a major scientific study.

Stocks have collapsed in nearly one-third of sea fisheries, and the rate of decline is accelerating. Writing in the journal Science, the international team of researchers says fishery decline is closely tied to a broader loss of marine biodiversity. But a greater use of protected areas could safeguard existing stocks.

"The way we use the oceans is that we hope and assume there will always be another species to exploit after we've completely gone through the last one," said research leader Boris Worm, from Dalhousie University in Canada.

This is a vast piece of research, incorporating scientists from many institutions in Europe and the Americas, and drawing on four distinctly different kinds of data.

Catch records from the open sea give a picture of declining fish stocks. In 2003, 29% of open sea fisheries were in a state of collapse, defined as a decline to less than 10% of their original yield.

Bigger vessels, better nets, and new technology for spotting fish are not bringing the world's fleets bigger returns - in fact, the global catch fell by 13% between 1994 and 2003.

Historical records from coastal zones in North America, Europe and Australia also show declining yields, in step with declining species diversity; these are yields not just of fish, but of other kinds of seafood too.

Zones of biodiversity loss also tended to see more beach closures, more blooms of potentially harmful algae, and more coastal flooding. Experiments performed in small, relatively contained ecosystems show that reductions in diversity tend to bring reductions in the size and robustness of local fish stocks. This implies that loss of biodiversity is driving the declines in fish stocks seen in the large-scale studies.

The final part of the jigsaw is data from areas where fishing has been banned or heavily restricted. These show that protection brings back biodiversity within the zone, and restores populations of fish just outside.

"The image I use to explain why biodiversity is so important is that marine life is a bit like a house of

cards," said Dr Worm. "All parts of it are integral to the structure; if you remove parts, particularly at the bottom, it's detrimental to everything on top and threatens the whole structure.

"And we're learning that in the oceans, species are very strongly linked to each other - probably more so than on land "

Protecting stocks demands the political will to act on scientific advice - something which Boris Worm finds lacking in Europe, where politicians have ignored recommendations to halt the iconic North Sea cod fishery year after year.

Without a ban, scientists fear the North Sea stocks could follow the Grand Banks cod of eastern Canada into apparently terminal decline.

"I'm just amazed, it's very irrational," he said. "You have scientific consensus and nothing moves. It's a sad example; and what happened in Canada should be such a warning, because now it's collapsed it's not coming back."

Millions Spent On Giving Animals Drugs

British universities have spent £10 million in the last decade feeding animals mind bending drugs and getting them to perform tasks such as burying marbles and swimming in milk, it was claimed today.

But the trials, which are mainly carried out on rats and mice, are pointless because they are testing for effects of recreational drugs that are already well documented in human studies, The British Union for the Abolition of Vivisection (BUAV) claimed.

The group said that in a Cambridge university study, researchers gave mice lethal doses of crystal meth, and then played them loud music by Bach and the Prodigy.

And at Birmingham University, in a study estimated to cost up to £100,000, rats were given cannabis to see if it increased their hunger - a well documented phenomena amongst students known as the munchies.

Animals have been fed drugs and then encouraged to attempt activities including burying marbles and swimming in vats of milk in tests at Liverpool, Nottingham, Aberdeen and Leicester's De Montfort

universities. But a report released today by BUAV said that millions of pounds of taxpayers' money were being wasted in the trials.

The study - Creatures of Habit by BUAV scientist Dr Katy Taylor BSc PhD - said UK universities have repeatedly won licenses from the Home Office to spend money giving often lethal doses of crystal meth, cocaine, cannabis, speed and ecstasy to animals to test effects that were already well documented in human subjects.

The research found that at least £1.6 million had been spent by scientists at Cambridge University on studies which included addicting rats to cocaine.

And in another Cambridge study, funded by the Medical Research Council, rats were driven mad through isolation and so scientists could test the effects of speed on their ability to carry out simple tasks.

Few of the studies have been cited by other researchers, which means that the studies were a scientific waste of time which caused pain and death to the animals, BUAV said. "Surely public funds would be better spent on relevant, ethical human volunteer

research, improving drug rehabilitation centres and helping families dealing with drug abuse?"

"Finding out that cannabis causes the munchies is not adding to the knowledge we need to help people with drug problems. Money that is needed for drug treatment programs is being wasted on these studies."

"It may be interesting research, but it is not valuable, and when you look at the suffering caused to the animals, we can't see the point of it."

"I'm sure the researchers felt they were adding to the sum of human knowledge, but I'm not sure they were. Research is done because people want to find out the answers to questions, but they don't think 'do we need to know this?'

"We don't need to know that rats get the munchies. We are finding out this information in proper studies using human beings. Studies are being done with recreational drug users who are happy to make themselves available to researchers."

Vegan Diets Healthier for Planet, People Than Meat Diets

The food that people eat is just as important as what kind of cars they drive when it comes to creating the greenhouse-gas emissions that many scientists have linked to global warming, according to a report accepted for publication in the April issue of the journal Earth Interactions.

Both the burning of fossil fuels during food production and non-carbon dioxide emissions associated with livestock and animal waste contribute to the problem, the University of Chicago's Gidon Eshel and Pamela Martin wrote in the report. And with Earth Day approaching on April 22, cutting down on just a few eggs or hamburgers each week is an easy way to reduce greenhouse-gas emissions, they said.

The average American drives 8,322 miles by car annually, emitting 1.9 to 4.7 tons of carbon dioxide, depending on the vehicle model and fuel efficiency. Meanwhile, Americans also consume an average of 3,774 calories of food each day.

In 2002, energy used for food production accounted for 17 percent of all fossil fuel use in the United States.

And the burning of these fossil fuels emitted threequarters of a ton of carbon dioxide per person.

That alone amounts to approximately one-third the average greenhouse-gas emissions of personal transportation. But livestock production and associated animal waste also emit greenhouse gases not associated with fossil-fuel combustion, primarily methane and nitrous oxide

While methane and nitrous oxide are relatively rare compared with carbon dioxide, they are — molecule for molecule — far more powerful greenhouse gases than carbon dioxide. A single pound of methane, for example, has the same greenhouse effect as approximately 50 pounds of carbon dioxide.

In their next phase of research, Eshel and Martin will examine the energy expenditures associated with small organic farms, to see if they offer a healthier planetary alternative to large agribusiness companies. Such farms typically provide the vegetables sufficient to support 200 to 300 families on plots of five to 10 acres.

October 6, 2006, SiberNews (www.sibernews.com)

Eating Up the Amazon

The Amazon rainforest is one of the most biodiverse regions on earth. It is home to nearly 10% of the world's mammals and a staggering 15% of the world's known land-based plant species, with as many as 300 species of tree in a single hectare.

The region is also home to about 220,000 people from 180 different indigenous nations3 who live deep in the rainforest, along with many more traditional forest-dependent communities.

The rainforest provides these people with everything from food and shelter to tools and medicines, and plays a crucial role in the spiritual life of indigenous peoples.

All this is threatened by deforestation and related crimes, committed for the sake of the profits to be made from agricultural commodities such as soya.

Since Brazil's President Lula da Silva came to power in January 2003, nearly 70,000km² of the Amazon rainforest has been destroyed.

Between August 2003 and August 2004, 27,200km² – an area the size of Belgium – was lost. Three-quarters of this destruction was illegal. That's an area 10km long by 7.5km wide lost every day. More than 3km² every hour. A football pitch every eight seconds. In 2004–05 around 1.2 million hectares of soya (5% of the national total) was planted in the Brazilian Amazon rainforest.

It is well documented that slave labour is used to clear forest for agriculture. Mato Grosso and Pará – the two Amazon states at the leading edge of the soya frontier – are responsible for more than half of all the slaves reported in Brazil. Between 2003 and 2004, the Brazilian Government reported nearly 8,700 slaves in the two states.

Up to 75% of Brazil's greenhouse gas emissions result from deforestation – with the majority coming from the clearing and burning of the Amazon rainforest. Amazingly, relative to its industrialised size, Brazil is the world's fourth largest climate polluter.

Three US-based agricultural commodities giants — Archer Daniels Midland (ADM), Bunge and Cargill — are responsible for about 60% of the total financing of soya production in Brazil. Together, these three companies also control more than three-quarters of the soya

crushing capacity in Europe that supplies soya meal and oil to the animal feed market

With an estimated 13 silos and an illegal port facility already built into the Amazon rainforest, Cargill is leading soya's invasion of the region – spurring the incursion of illegal farms and building infrastructure to deliver Amazon soya to global markets. Bunge and ADM are following Cargill's lead, with an estimated six and four silos respectively in the Amazon.

80% of the world's soya production is fed to the livestock industry. A study published last month in the British scientific journal Nature said that, on present trends, cattle ranchers and soybean farmers will have destroyed 40 percent of the Amazonian forest by 2050.

Spiralling demand for soya animal feed from European agribusiness is driving the expansion of the agricultural frontier into the Amazon rainforest. Europe buys half the soya exported from the Amazon state of Mato Grosso, where 90% of rainforest soya is grown. Meat reared on rainforest soya finds its way onto supermarket shelves and fast food counters across Europe.

Beans the Elixir of Life?

A recent international study runs from Melbourne under the auspices of WHO has found that the one common factor shared by five long-lived populations was high legume consumption.

The researchers studied the diet, health status and social status of five groups of people over 70 years of age and collected mortality data for seven years. The groups were Japanese in Japan, Swedes in Sweden, Anglo-Celtic in Australia and Greece

Out of the food groups: vegetables, legumes, fruits and nuts, cereals, dairy products, meat fish, monosaturated fat and alcohol, only legume consumption was significantly associated (negatively) with death rate. There was a 7-8% reduction in the risk of dying for every 20 gram increase in daily legume consumption. The authors write that "legumes have been associated with long-lived food cultures such as the Japanese (soy, tofu, natto, miso), the Swedes (brown beans, peas), and the Mediterranean people (lentils, chickpeas, white beans)."

Leafy Green Vegetables May Help Keep Brains Sharp Through Aging

Folate, a B vitamin found in foods like leafy green vegetables and citrus fruit, may protect against cognitive decline in older adults. The research was conducted by scientists at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University.

A team studied a group of Boston-area men who were members of the ongoing Normative Aging Study (NAS). Men who obtained more folate in their diets showed significantly less of a decline in verbal fluency skills over the course of three years than did men with lower dietary folate intake.

High folate levels, both in the diet and in the blood, also appeared to be protective against declines in another category of cognitive skills known as spatial copying. To test this, the 50- to 85-year-old study participants were asked to copy various shapes and figures, and their drawings were assessed for accuracy. The men took a series of cognitive tests at the beginning of the study period and then repeated those tests three years later.

American Journal of Clinical Nutrition. 82:627 (2005)

Kiwifruit and Omega 3

Auckland based Vital Foods company have developed a viable way of producing a kiwifruit based health supplement with Omega 3 and Omega 6 fatty acids.

Omega 3 is essential nutrients for brain and eye development in young children, and has been shown to reduce the risk of coronary heart disease, boost the cardiovascular system and aid in joint mobility.

Other Omega 3 supplements on the market are usually derived from fish oil. Until recently Vita Foods were not able to gather the seeds in sufficient quantities, but the development of a frozen kiwi fruit drink with digestion improving properties allowed them to develop a patented process, isolating kiwifruit enzymes and repackaging them into a health supplement.

Production of three tones of Omega 3 health supplement capsules is expected this year, and the product will then be marketed to pharmacies in Germany, Australia and New Zealand.

What's In a Chicken Nugget?

A recent newspaper article on chicken nuggets ("The wisdom of nuggets" Sunday Star Times October 3, 2004) revealed some disturbing facts about this common food for children.

By law only 30 percent of the nugget will be chicken meat – which according to the Food Standards Code can be composed of "meat flesh" which is skeletal muscle of any slaughtered animal, and any attached animal rind, fat, connective tissue, nerves, blood, blood vessels and in the case of poultry, skin.

This article reported that consumers now increasingly buy skinless chicken breasts, which means that the other parts of the animal have to be disposed of. Internationally there is some variation – the Japanese prefer thighs, in China they like the feet and in Russia they prefer gizzards. But as Felicity Lawrence said in her book: Not on the Label: "... that leaves the carcasses and mountains of skin. So the skin is shipped around the world to make chicken nuggets."

Although New Zealand nuggets are made from New Zealand bird parts, the issue is the same – nuggets are reconstituted chicken parts. As microbiologist Tek Lok

Wang says: "The skin is part of the meat ... It is still part of the chicken, it's just that it is a recovered product. If you're selling chicken breast, you will have a lot of skin left over. Either they go to the tip or make it into something else."

In his recent report, Tek formally described a chicken nugget as: a small piece of reconstituted raw chicken product encased in flash-fried batter or crumbs, containing between 33% and 56% chicken-derived material (skinless breast and thigh meats, and skin), as well as flour and starch binders, water, say protein, milk solids, mineral salts and flavourings.

A 100g portion of McDonald's Chicken McNugget contains 8.6g saturated fat, compared with baked composite generic nuggets: 2.2%. roast chicken: 4.64% Pam's chicken nuggets: 3%.

In New Zealand the average chicken is grown to slaughter in 38 days.

Would you like fries with that?

Veal: A Byproduct of the Cruel Dairy Industry

Millions of cows who live on U.S. dairy farms are forced into a vicious cycle of continuous pregnancy so that they will produce milk for human consumption. Their female calves are slaughtered immediately or used to replace their mothers in the dairy herd, and many male calves suffer a fate that is completely different but no less cruel—one of confinement, darkness, malnutrition, and slaughter.

Calves born on dairy farms are taken from their mothers the day they are born and fed milk replacers, including cattle blood, so that humans can have the milk instead.

Veal calves are forced to spend their short lives in individual crates that are no more than 30 inches wide and 72 inches long. These crates are designed to prohibit exercise and normal muscle growth in order to produce tender "gourmet" veal. The calves are fed a milk substitute that is purposely low in iron so that they will become anemic and their flesh will stay pale.

Because of these extremely unhealthy living conditions, calves raised for veal are susceptible to a long list of

diseases, including chronic pneumonia and diarrhea. A study published in the Journal of Animal Science found that calves who were kept in "smaller housing units" had difficulty keeping themselves clean and had trouble "extending their front legs and changing from a lying to a standing position," which resulted in joint swelling. It was also determined that stereotypical stress behaviors such as tongue rolling and "shamchewing" (the act of chewing without food in the mouth) increase when smaller pens were used and as calves got older.

After enduring 12 to 23 weeks in these conditions, these young animals, many of whom can barely walk because of muscle atrophy or sickness, are crowded into metal trucks for transport to the slaughterhouse.

In early 2004, federal officials found a "suspicious lump" in a Wisconsin calf, which turned out to be a hormone implant. The subsequent investigation revealed that as many as 90 percent of U.S. veal calves are illegally fed synthetic testosterone, and a spokesman for the American Veal Association confessed that the practice had been going on for 30 years.

Pigs: Intelligent Animals Suffering in Factory Farms and Slaughterhouses

On any given day in the United States, there are nearly 63 million pigs in factory farms, and 104 million are killed for food each year. Factory-farming conditions are no better in Canada, which exports more than 8 million live pigs to the U.S. for slaughter each year.

Mother pigs (sows)—who account for more than 6 million of the pigs in the U.S.—spend most of their lives in individual "gestation" crates. These crates are about 7 feet long and 2 feet wide—too small for them even to turn around. After giving birth to piglets, sows are moved to "farrowing" crates, which are wide enough for them to lie down and nurse their babies but not big enough for them to turn around or build nests for their young.

Piglets are separated from their mothers when they are as young as 10 days old. Once her piglets are gone, each sow is impregnated again, and the cycle continues for three or four years before she is slaughtered.

After they are taken from their mothers, piglets are confined to pens until they are separated to be raised for breeding or meat. Because they, too, are extremely

crowded and prone to stress-related behaviors (such as cannibalism and tail-biting), farmers chop off piglets' tails and use pliers to break off the ends of their teeth—without any painkillers. For identification purposes, farmers also cut out chunks of the young animals' ears.

Once pigs reach "market weight" (about 250 to 270 pounds), the industry refers to them as "hogs" and they are sent to be slaughtered. According to industry reports, more than 1 million pigs die en route to slaughter each year. A former pig transporter told PETA that pigs are "packed in so tight, their guts actually pop out their butts—a little softball of guts actually comes out." A typical slaughterhouse kills about 1,000 hogs per hour. Because of improper stunning, many hogs are alive when they reach the scalding-hot water baths, which are intended to soften their skin and remove their hair.

Because crowding creates an environment conducive to the spread of disease, pigs in factory farms are fed and sprayed with huge amounts of pesticides and antibiotics. The pesticides and antibiotics remain in their bodies and are passed on to people who eat them. Pigs and other factory-farmed animals are fed 20 million pounds of antibiotics each year.

Each factory-farmed pig produces about 9 pounds of manure per day. As a result, many tons of waste end up in giant pits in the ground or on crops, polluting the air and groundwater. According to the Environmental Protection Agency, agricultural runoff is the number one source of pollution in our waterways. A Missouribased hog farm had to pay a \$1 million fine for illegally dumping waste, which caused the contamination of a nearby river and the deaths of more than 50,000 fish. Smithfield Foods was fined \$12.6 million for polluting the Pagan River with phosphorous-contaminated wastewater from its slaughter plant.

Pigs and other farmed animals are the primary consumers of water in the U.S.; a single pig may require up to 21 gallons of drinking water per day. Eighty percent of agricultural land in the U.S. is used to grow food to meet the needs of pigs and other factory-farmed animals. In the "finishing" phase alone, during which pigs grow from 100 to 240 pounds, each hog consumes more than 500 pounds of grain, corn, and soybeans; this means that across the U.S., pigs eat tens of millions of tons of feed every year.

Poultry and Eggs: Industries That Abuse Chickens

More than 9 billion chickens are raised and killed for meat each year in the United States. The industry refers to these chickens as "broilers" and raises them in huge, ammonia-filled, windowless sheds, where artificial lighting is manipulated to make birds eat as often as possible.

To keep up with demand and reduce production costs, genetic selection and a steady dose of growth-promoting drugs are used to ensure large, fast-growing birds. Today, most chicks take only six to seven weeks to reach "processing" weight, and chickens raised for meat weigh an average of one-fifth more than those raised in the 1950s.

More than 285 million hens are raised for eggs in the U.S., and nearly all of them spend their lives in battery cages, stacked tier upon tier in huge warehouses. Confined seven or eight to a cage, these birds don't have enough room to turn around or even spread one wing. Each year, millions of day-old male chicks are killed—usually in high-speed grinders called "macerators," which shred them alive—because they are worthless to the egg industry.

To prevent stress-induced behaviors caused by extreme crowding, such as pecking cagemates to death, hens are kept in semi-darkness, and the ends of their sensitive beaks are cut off with a hot blade—no painkillers are administered during this painful process.

Although chickens can live for more than a decade, hens raised for their eggs are exhausted, and their egg production begins to wane when they are about 2 years old. When this happens, they are slaughtered. More than 100 million "spent" hens are killed in slaughterhouses each year.

The lives of chickens raised for meat and eggs end with a grueling trip to the slaughterhouse. Before the terrifying journey, chickens are caught by workers and placed in crates. After they reach the slaughterhouse, the birds are dumped out of their crates and hung upside-down in shackles, further injuring their legs, which are already tender and often broken. Their throats are slit by machines, and they are immersed in scalding-hot water for feather removal. They are often conscious throughout the entire process. Often, because their bones are so brittle from egg production that the electric current would cause them to shatter, hens are not even stunned before their throats are slit.

Factory farms simply cannot raise billions of animals per year without using drugs that allow the animals to survive cramped and unhealthy conditions that would otherwise kill them. Millions of pounds of antibiotics are fed to chickens, who metabolize only about 20 percent of the drugs fed to them: The remaining 80 percent end up in their feces. The 3 trillion pounds of waste produced by factory-farmed animals each year are usually used to fertilize crops and subsequently end up leaching into waterways—along with the drugs and bacteria that they contain.

Environmental and human health problems are developing as a result of this unchecked use of antibiotics. A U.S. geological study found 14 antibiotics used in animal agriculture and human medicine in almost 50 percent of the waterways tested.

One scientist examined poultry workers' health and found that more than 40 percent of the test subjects were infected with campylobacter and that the bacteria were "supersized" and resistant to antibiotics. A Consumer Reports study of 525 supermarket chickens found campylobacter in 81 percent of them and salmonella in 15 percent; up to 84 percent of the bacteria were resistant to antibiotics.

Fish - Too Polluted to Eat?

Brussels, Belgium - New research has shown that some fish are so contaminated with chemicals that they may be harmful to eat

For years people have been advised to eat portions of oily fish each week as the key to a healthy lifestyle. Now British government scientists are warning girls and pregnant women that some fish are so polluted with chemicals that eating them could interfere with their reproductive capacities.

The British Food Standards Agency (FSA) admitted this summer that "some oily fish contains chemicals such as dioxins and polychlorinated biphenyls (PCBs), which accumulate over time in the body and could have adverse health effects if consumed over long periods of time".

To prevent the build up of dioxins in women's bodies which could potentially damage unborn children, the FSA is now recommending that young and adult women should only eat between one and two portions of oily fish a week. This is a change from their previous advice to consume oily fish in generous amounts to reduce the risk of death from heart disease.

Polychlorinated biphenyls (PCBs) are a group of chemicals introduced in the 1950s, and used in paints, adhesives, coolants and insulating materials. They were found in the late 1960s to be contaminating wildlife, and were gradually banned around the world, culminating in global restrictions in the 2001 Stockholm Convention on Persistent Organic Pollutants (POPs).

However, the damage has been done — they have leaked into the environment, including into the oceans of the world. From here they settled into sediment, where they were absorbed by plants and microorganisms, slowly making their way up the food chain. Because they are bioaccumulative and persistent, their effects persist, and their concentration increases with every step in the food chain.

Among their effects, they have been found to be carcinogenic and toxic and to damage the immune system, the reproductive system, the neurological system and the endocrine system in both animals and humans. Hence the British government warning to women of childbearing age.

The warning about oily fish coincided with a British Environment Agency survey revealing that one-third of

male fish in British rivers now have female reproductive tissues and organs, caused by feeding off sewage effluent containing both natural female hormones and the synthetic hormone ethinyloestradiol used in the female contraceptive pill. A survey of more than 1,500 fish in 50 rivers, carried out over the last 20 years, shows that the feminising effects in the fish are directly related to their exposure to treated sewage effluent

The most significant substances from domestic sewage effluents are the natural steroid hormones oestradiol and oestrone, and the synthetic hormone ethinyloestradiol contained in the contraceptive pill.

Dr Nick Cartwright, the chemicals policy adviser for the Environment Agency, explained that ethinyloestradiol is 1,000 times more potent than other hormones and could persist in the environment for up to 90 days, 20 times longer than natural hormones. The 'intersex fish' phenomenon was first noted in roach in the River Lea in Hertfordshire more than 10 years ago. Subsequent studies of fish in eight rivers near large sewage-treatment works showed this was linked to water pollution and this was then verified by laboratory studies.

The build up of chemicals in fish is also causing concern in Spain. A study of the fish and sediment in the Cinca River, a tributary of the Ebro River in northern Spain has revealed that fish are being contaminated with brominated flame retardants.

These flame retardants, particularly polybrominated diphenyl ethers (PBDEs) and hexabromocyclododecane (HBCD), are used in plastics, textiles, electric circuits and other materials. PBDEs in particular have been called the "sons of PCBs" because of their similar chemical structure. Like PCBs, they are bioaccumulative.

A research team from IIQAB-CSIC in Barcelona studied the level of chemicals in both the sediment and the fish in four heavily industrialised sections of the Cinca River, near Monzon, a heavily industrialised town draining the river.

The sediment contained PBDEs at levels from 2–42 ng/g dry weight and HBCDs at levels ranging from not detected (nd) to 514 ng/g dry weight. The team analysed 23 fish and found they contained 17 different types of PBDEs in quantities between nd–446 ng/g wet weight and from nd to a massive-1172 ng/g wet weight for HBCDs.

Of 40 congeners (from mono- to deca-BDEs) included in the analytical work, eight PBDE congeners were detected in river sediments, whereas 17 different PBDEs were found in fish samples with the exception of deca-BDE which was only detected in sediment samples.

The researchers also discovered that the larger — and thus the more mature — the fish, the higher the amount of chemicals they contained, indicating that these chemicals were bioaccumulative. A comparison of concentrations of PBDEs and HBCDs in the sediment and the large fish showed that the two chemicals were also bioavailable (that is, capable of being absorbed into the fishes' cells).

PBDE has also been found to have contaminated wild and farmed salmon and has found its way into the salmon on sale in supermarkets.

Because of the harm they are known to be able to cause, two BDEs — penta-BDE and octa-BDE — were banned this August (2004) by the European Union, so industrial production has shifted to HBCD, another flame retardant.

Until now, very little research had been carried out on whether HBCD contamination was as widespread in the environment as PBDEs. These results show that HBCD is now a greater contaminant in some industrial areas such as the Ebro River Basin. Thus is appears that as soon as measures are taken to control one chemical with hazardous effects, an similar but less understood substitute is used that can spread as quickly into the environment with similar effects.

Research findings such as these show how important it is to oblige industry to provide safety information on all their chemicals, in order to prevent them causing further damage to wildlife, humankind and the environment.

October 1, 2004, WWF (www.panda.org)