



THE HUMANE SOCIETY
OF THE UNITED STATES

TOXIC FUR:

The Impacts of Fur Production on the Environment and the Risks to Human Health

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For the past several years, public sentiment against animal fur has been growing in the United States.¹ It was during this same period that investigative footage of animals being skinned alive in China was made public, and many apparel companies were being tied to falsely advertised or falsely labeled fur, much of it from China. For these reasons, more and more companies and consumers have been rejecting fur—by adopting fur-free corporate policies, and by discriminating with their purchasing power. Perhaps in a bid to turn attention away from these troubling issues, in 2007 the Fur Council of Canada revived its past advertising campaign touting animal fur as synonymous with “eco-fashion,” using the slogan “Fur is Green.” However, at a time when “green” fashion is popular, eco-conscious consumers are wary of “greenwashing,” marketing a product as more environmentally friendly than it really is. According to criteria stipulated by the Fur Council of Canada, “environmentally friendly apparel and accessories should be made from natural materials that are...renewable, durable, long-lasting, reusable, recyclable, biodegradable, non-polluting, [and] energy efficient in their production, use and disposal.”² This paper addresses the fur industry’s claims and demonstrates how the use of animal fur by the fashion industry is far from environmentally friendly. Rather, the production of fur for fashion imposes significant adverse impacts on both the environment and human health. If you or your company cares about the environment, avoid buying, wearing or selling animal fur.

The fur production process is highly detrimental to the environment. It is intensely polluting, energy intensive and can wreak havoc on ecosystems.

Water pollution. Mink, foxes, raccoon dogs, rabbits and other species with the misfortune of having attractive fur are raised in wire mesh battery cages on fur confinement operations, described euphemistically as “fur farms,” to account for 85% of the world’s production of animal fur.³ The animal wastes contain high concentrations of nitrogen and phosphorus.⁴ A 2003 Michigan State University study in the *Fur Rancher Blue Book of Fur Farming* states that “the U.S. mink industry adds almost 1,000 tons of phosphorus to the environment each year.”⁵ Excess levels of nitrogen and phosphorus are the most common form of water pollution in the United States.⁶ If not properly handled, the chemicals in the waste collected at these fur confinement operations pollute local water systems through runoff and leaching.⁷ If present in a large enough quantity, nitrogen eutrophication will lead to decreased oxygen levels and fish kills.⁸

Air pollution. In addition to air pollution arising from gases released in the animals’ manure,⁹ significant air pollutants are released when disposing of animal carcasses by incineration,¹⁰ a fairly common method of disposal.¹¹ These air pollutants may include carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO₂), hydrochloric acid (HCl), volatile organic compounds (VOCs), dioxins, particulates and heavy metals.¹² Furthermore, the European Commission considers air pollution to be one of the chief environmental concerns of the tanning¹³ process, whereby toxic and odorous substances are typically emitted during normal tannery operations.¹⁴

How serious is the pollution generated by the fur industry?

The 2003 European Commission Integrated Pollution Prevention and Control Bureau “Reference Document on Best Available Techniques for the Tanning of Hides and Skins” recognizes the tanning¹⁵ industry as “a potentially pollution-intensive industry.”¹⁶ The Industrial Pollution Projection System rates the fur dressing and dyeing industry one of the five worst industries for toxic metal pollution to the land.¹⁷ And in 1991, the U.S. Environmental Protection Agency (EPA) fined six fur processing plants \$2.2 million for the pollution they caused, citing them for hazardous waste violations and stating that “the solvents used in these operations may cause respiratory problems, and are listed as possible carcinogens.”¹⁸

The Chinese government is also notably concerned about the pollution caused by fur dyeing factories.¹⁹ In December 2007, a fur trade publication, *The Trapper & Predator Caller*, reported that China was considering imposing a punitive tax on the fur dressing and tanning industries as part of an attempt to penalize “industries causing excessive pollution.”²⁰

Energy consumption. Energy is consumed at every stage of fur production. This is in addition to the energy costs of transporting the animal pelts and finished fur garments around the globe, throughout all the stages of fur production—beginning with transporting feed to fur farms or trappers setting and checking their trap lines, then shipping the animal pelts to international auctions and on to dressers, dyers, manufacturers, wholesalers, retailers and finally to the consumer.

In describing the energy input required to run intensive animal farming operations, The Pew Charitable Trusts and Johns Hopkins Bloomberg School of Public Health note in a 2008 report that such systems are “almost entirely dependent on fossil fuels.”²¹

A tremendous amount of gasoline is used by trappers to check their miles of trap lines on a regular basis, to remove dead and dying animals, and to reset the traps. In many of the highest-volume trapping states such as Michigan,²² Ohio²³ and Wisconsin,²⁴ trappers are required to check their traps every day for the three to four month duration of the trapping season. This is done with gasoline-burning vehicles including trucks, snowmobiles, four-wheelers and even airplanes.²⁵ And when trapping in inaccessible areas of Alaska, “many gallons of expensive gasoline must be freighted in” simply to operate snowmobiles.²⁶ Because they use so much gasoline, a steep rise in price per gallon may lead many trappers to reduce or eliminate how many traps they set.²⁷

To account for the amount of energy required to operate tanneries²⁸, the European Commission maintains “it is necessary to record the energy consumption for electricity, heat (steam and heating) and compressed air, particularly for the units with highest consumption, such as waste water treatment and drying procedures.”²⁹

In *Mink Production*, a “manual for fur breeders,” the Danish Fur Breeders Association and Scientifur discuss the energy consumed during the pelting and drying process: “A pelting plant is not complete without a storeroom in which the temperature can be kept between 10 and 12°C...and the humidity at about 70-80%.” The suggested drying room similarly requires a constant temperature and an energy-powered system for discharging a controlled amount of water.³⁰

The consumption of energy for animal fur apparel does not end once the fur coat has been purchased by a consumer. The Fur Information Council of America urges fur owners to annually store their furs in commercial furriers' vaults in which "air exchange is carefully regulated with temperatures kept below 50 degrees Fahrenheit and a constant humidity level of 50%."³¹ The rationale for summer cold storage, summarized by Sandy Parker, a noted analyst and reporter within the fur industry, is that for many fur retailers, this represents "the most lucrative aspect of [the entire fur] business."³²

Fur garments are processed with caustic and often toxic chemicals hazardous to human health.

After animals have been killed by gassing, neck-breaking, or anal or genital electrocution on fur confinement operations, or after crushing, drowning, shooting or strangulation on trap lines, their skin is removed—pulled off the animal's body, sometimes while the animal is still conscious. Now referred to as a "pelt," the animal's skin with the hair still attached is sent to be tanned ("dressed" in industry parlance) and perhaps dyed, bleached, or otherwise treated.

Common methods for dressing fur skins involve formaldehyde and chromium³³—chemicals that are listed as carcinogens and are otherwise toxic to humans. Other chemicals that may be used or emitted in the dressing and dyeing processes³⁴ and that appear on one or more US government lists of toxic chemicals include aluminum,³⁵ ammonia,³⁶ chlorine,³⁷ chlorobenzene,³⁸ copper,³⁹ ethylene glycol, lead, methanol,⁴⁰ naphthalene, sulfuric acid,⁴¹ toluene and zinc.

Formaldehyde. According to the Fur Council of Canada, "small quantities of formaldehyde can be used to protect fur follicles during dressing or dyeing."⁴² Classified under Occupational Safety and Health Administration (OSHA) standards for carcinogens,⁴³ formaldehyde is on every major list of toxic substances, including the EPA Toxics Reporting Industry (TRI) list of reportable toxic chemicals,⁴⁴ the American Apparel and Footwear Association Restricted Substances List (AAFA-RSL)⁴⁵ and the California Proposition 65 SuperList of chemicals known to cause cancer.⁴⁶ According to the International Agency for Research on Cancer (IARC), this chemical "is carcinogenic to humans."⁴⁷ This expert working group of 26 scientists from 10 countries determined in 2004 that "there is now sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans" and strong evidence that formaldehyde causes leukemia.⁴⁸

Chromium. The chemical at the center of the basic "chrome tanning" process,⁴⁹ Chromium is widely considered to be toxic and even carcinogenic in some forms. In 2003, children's toys and other retail items made with dog and cat fur and sold in Australia and Europe were found to contain toxic levels of chromium.⁵⁰ Chromium is on the TRI List of reportable toxic chemicals⁵¹, the AAFA-RSL list,⁵² and the California Proposition 65 list of chemicals known to cause cancer or reproductive effects.⁵³

Naphthalene. Used during the dyeing and finishing stages as a component of the oxidation dyes,⁵⁴ Naphthalene is also an OSHA carcinogen,⁵⁵ considered to be "possibly carcinogenic" by the IARC,⁵⁶ "reasonably anticipated to be a human carcinogen" by the

National Toxicology Program (NTP),⁵⁷ and a feature of the TRI,⁵⁸ AAFA-RSL⁵⁹ and California Proposition 65⁶⁰ lists of toxic chemicals.

Additional risks. Ethylene glycol, lead and toluene are among the chemicals used known to be developmentally and reproductively toxic to men and women.⁶¹ Zinc is also toxic in certain forms.⁶² The NTP recognizes toluene and lead—both OSHA carcinogens⁶³—as chemicals that are “reasonably anticipated to be a human carcinogen.”⁶⁴ This is echoed by the IARC, which classifies lead as “probably carcinogenic to humans”⁶⁵ and toluene as “possibly carcinogenic to humans.”⁶⁶

Furthermore, the *Encyclopaedia of Occupational Health and Safety* (4th ed.) states that “various chemicals used in the fur industry are potential skin irritants.”⁶⁷ A 1998 study of workers in the American Journal of Industrial Medicine found that employment as leather and fur processors may be associated with women’s increased risk of breast cancer.⁶⁸

Heavily processed fur is unnatural.

Although there has yet to be a legal definition attached to the word “natural” (especially as pertaining to labeling and marketing by the food, cosmetics and apparel industries), there is general consensus among government agencies that “natural” products are those that have had minimal processing, and that no chemicals or substances were added to the product that would not normally be expected to be there.⁶⁹

Inhibiting rot. The chemicals listed in the section above are just a sample of all those used in fur dressing and dyeing, and all furs are dressed in order to be used for fashion. Dressing is important as it prevents fur from biodegrading. In the pre-dressing preservation process, “common salt is used to remove moisture from the skin, *inhibiting putrefaction* [italics added].”⁷⁰ This is the explicit purpose of subjecting fur garments to a dressing process before they can be sold—to stop the natural process of biodegrading.

Unnatural confinement. Furthermore, the term “natural” is inaccurate when used to describe the origins of the majority of the world’s fur. The International Fur Trade Federation states that “wild fur represents about 15% of the world’s trade in fur,” leaving the great majority—85% by its own estimate—of the world’s fur to come from fur-bearing animals raised unnaturally on “fur farms”.⁷¹ The confinement operations typically consist of rows of barren cages in which wild animals spend their entire lives deprived of their natural habitat. Their freedom of movement is severely restricted, preventing the expression of many natural behaviors such as digging, for foxes, or swimming, for mink. As a result of such stresses, animals caged for fur frequently exhibit “stereotypic behavior”—abnormal and often repetitive pacing, circling or other movements, which can be an indicator of poor welfare.⁷²

Trapping endangered animals. Even so-called wild fur often comes at great cost to nature, particularly for those species who are disappearing. The three most commonly used traps—the steel-jawed leghold trap, the Conibear body-crushing trap and the snare—can catch or kill any animal that triggers them. As these traps cannot discriminate, animals caught may include threatened and endangered species such as the gray wolf, lynx and bald eagle, and many other non-target animals including pets and hunting dogs. Gray wolves are frequently caught by mistake in coyote snares and other

furbearer traps,⁷³ while they are currently listed as “endangered” under the Endangered Species Act.⁷⁴ In addressing the gray wolf’s recovery status, the U.S. Fish and Wildlife Service hosts a webpage for tips to avoid catching wolves in traps.⁷⁵ The Canada lynx is currently listed as “threatened,”⁷⁶ although records in a 2007 lawsuit against the Minnesota Department of Natural Resources (DNR) indicated that more than one dozen lynx have been injured or killed by indiscriminate traps in Minnesota since 2002. The Humane Society of the United States and Help Our Wolves Live sued the Minnesota DNR for violating the Endangered Species Act by authorizing and managing fur trapping that harmed this protected species and reached a settlement. The Minnesota DNR also has evidence on the loss of bald eagles, listed as “threatened” under the Endangered Species Act,⁷⁷ by accidental trapping.⁷⁸

Conclusion: Animal fur is not “green.”

Abiding by the Fur Council of Canada’s own criteria for what it means to be an environmentally friendly product, it becomes clear that because fur production is intensely polluting, energy-consumptive and an otherwise unnatural process, fur cannot be considered an environmentally friendly product. In addition, as the processing of fur employs a host of toxic and carcinogenic chemicals, a more apt conclusion is that common production processes for fur garments and accessories put human health and our environment at risk.

While this paper has looked at an important aspect of the fur industry, it must not obscure the well-documented animal welfare problems and outright barbarism associated with the killing of over 75 million animals each year for an unnecessary product.

Ultimately, the fur industry’s harm to our water, air, ecosystems and all of the species in them—trapped and cage-raised animals as well as human beings—should inform one’s decision about whether to buy or sell fur. When you buy your next coat, remember that there are many alternative fabrics that will allow you to avoid supporting the cruel and environmentally destructive fur industry.

Endnotes

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