

Inherently Inhumane

A half century of evidence proves Canada's commercial seal hunt cannot be made acceptably humane

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Executive Summary

Canada's commercial seal hunt has been scrutinized by a large number of veterinarians and animal welfare experts over the past half century. Many of the resulting reports have been used by the Canadian government and sealing industry to suggest that the seal hunt has been, is now or has the potential to be made acceptably humane.

However, a careful review of the reports reveals the opposite. Rather than confirming humane killing at the commercial seal hunt, these reports clearly show a persistent and escalating level of unacceptable suffering.

In theory, methods of killing could be discussed for the commercial seal hunt that would fit within accepted standards of humane slaughter. However, the physical environment in which the Canadian seal hunt occurs, and the speed at which the killing must be conducted, prevents hunters from providing a humane death to seals with any degree of regularity or effectiveness. In many instances, it would be impossible for the seal hunter to implement humane slaughter techniques.

Since the 1960s, well intentioned veterinary and animal welfare experts have made similar recommendations to improve humane killing at the commercial seal hunt. Some of these recommendations have resulted in changes to regulations that govern the conduct of seal hunters. However, the consistent evidence of inhumane killing and regulatory violations in the present-day seal hunt suggests that what is written on paper has little impact on the actions of sealers.

The vast area in which the Canadian seal hunt occurs, the number of vessels and individuals licensed to participate in the seal hunt, and the scale and intensity of the killing are clear barriers to adequate monitoring of the hunt by Canadian authorities. Moreover, Fisheries Officers live within the remote, coastal communities they police, and this presents a distinct obstacle to enforcing regulations. The political control over the Department of Fisheries and Oceans by elected officials who reside in seal hunting provinces creates another enforcement challenge. The inability of authorities to effectively monitor the seal hunt, combined with the obstacles to enforcement of the regulations, means the Canadian public cannot be assured that hunting is carried out in a humane fashion, regardless of what the regulations dictate.

While there may be incremental steps that could be taken to make Canada's commercial seal hunt slightly less inhumane, it cannot be made acceptably humane according to Canadian and international standards of humane slaughter. History and the best available science shows that Canada's commercial seal hunt is inherently inhumane.

In keeping with the values of its citizens, Canada should end the commercial seal hunt if it is to claim to be a humane nation. Until this occurs, the onus is upon other nations—which subscribe to accepted standards of humane slaughter and yet allow the trade in seal products—to take action on behalf of their own citizens, and close their borders to these cruelly obtained items.

Biography

After graduating from the Ontario Veterinary College at the University of Guelph in 1986, Dr. Richardson practiced in a mixed animal hospital treating cattle, pigs, horses, dogs and cats. In 1989 she opened the Cat Hospital of Kitchener-Waterloo.

For almost 20 years, she has been involved in animal welfare issues. Working within her profession she chaired the Animal Welfare Committee for the Ontario Veterinary Medical Association and produced policy statements on a wide range of topics including the keeping of exotic and captive wild animals, ear cropping of dogs, and euthanasia. She was also asked to chair the Animal Care Review Board for the Solicitor General of Ontario. This required presiding over court cases involving animal abuse.

For a number of years, Dr. Richardson was a board member of the Centre for the Study of Animal Welfare, at the University of Guelph. Her experience with humane slaughter is extensive. As part of her position as a mixed animal practitioner, she was required to preside over all kills at a slaughter house to ensure a safe and humane death. In order to hold this position, she had to complete a course on humane slaughter at several slaughter plants in Toronto. For the past two years she has monitored the Ministry of Natural Resources cull of cormorants in Lake Ontario to assess the humaneness of the methods used to kill the birds.

Dr. Richardson has studied the commercial seal hunt for many years. She has reviewed countless hours of footage beginning in 1996, and has published numerous letters and articles on the topic.

Introduction

Canada's commercial seal hunt has been the subject of veterinary study and official observation for over half a century. These studies and observations have been sponsored by both the Canadian government and by non-governmental organizations on a reasonably consistent basis. While some Canadian government officials and sealing industry advocates have chosen to represent some of these studies as confirmation of humane killing at the seal hunt, a thorough examination of the reports shows consistent and mounting evidence of unacceptable cruelty.

Over the years, various bodies have created guidelines surrounding humane slaughter of animals. In Canada, the United States and Europe, there are generally accepted principles on the topic, which include minimizing stress experienced by the animal prior to slaughter, immediately rendering the animal irreversibly unconscious (and therefore insensitive to pain), testing for unconsciousness through an effective technique, and delivery of death through an accepted euthanasia method. Many of these bodies agree with the view of the American Veterinary Medical Association (2007) that, "conditions found in the field, although more challenging than those that are controlled, do not in any way reduce or minimize the ethical obligation of the responsible individual to reduce pain and distress to the greatest extent possible during the taking of an animal's life."

This review focuses on evidence of killing at the Canadian commercial seal hunt that does not conform to these general principles, found in reports by veterinary and animal welfare experts consistently over the past half century.

While the seal hunt has changed significantly in recent decades in terms of its mechanics and operation, there are common behaviours witnessed prior to 1987 that are relevant to the current seal hunt, and therefore merit attention.

Changes in the Commercial Seal Hunt

Prior to 1987, the Canadian commercial seal hunt targeted primarily newborn harp seal pups (whitecoats) and the pups of hooded seals (bluebacks). The annual slaughter was conducted by seal hunters on factory ships from both Canada and Norway, sealers brought to the ice via aircraft, landsmen hunting from vessels under 65 feet in length, and landsmen on foot. The hunt occurred in two primary areas: the Gulf of St. Lawrence and the “Front” (the ocean northeast of Newfoundland). The hunt was conducted by an estimated 5000 sealers.

The seal hunt was largely unregulated until 1964, when some basic rules were established. That year, the first Seal Protection Regulations established a sealing season, and prohibited the skinning of live animals. In 1967, seal hunting at night (in the dark) was forbidden, and in 1972, restrictions on killing implements were put into place. In 1979, it was mandated that sealers would have to bleed seals after clubbing them. In 1985, regulations specified the means and tools to render animals unconscious and verify death prior to handling and transport.

Prior to 1987, the seal hunt opened and closed on the same dates it does today (November 15-May 15). However, because hunters primarily targeted newborn harp seals (known as “whitecoats”), the bulk of the hunting occurred in early March when the pups were born.

In 1977, Canada imposed a 200 mile fishing limit, which largely excluded Norwegian vessels from the Canadian seal hunt. Then, a 1983 European Union prohibition on the trade in products of whitecoats and “bluebacks” (hooded seal pups) resulted in a dramatic reduction in the numbers of seals killed in the Canadian seal hunt. In 1987, the Canadian government banned the use of factory ships at the hunt, and the killing of whitecoats and bluebacks (Lavigne and Kovacs 1988).

After 1987, seal hunters refocused their efforts on slightly older harp seal pups—“ragged jackets” (very young pups that had begun to shed their white coats) and “beaters” (young pups that had fully shed their white coats). Canadian government data show that over the past few years, fully 97 percent of the seals that have been killed have been between 12 days and 12 weeks of age (HSUS 2007). In 1996, the Canadian government introduced a substantial direct subsidy to sealers. Hunt numbers increased dramatically that year and have remained high since (Gallon 2001).

In 1993, a set of *Marine Mammal Regulations* (MMRs) were adopted, replacing the *Seal Protection Regulations* of years past. Given hunters were now targeting more developed seals, an amendment was made to ensure proper gauge ammunition was being used. However, no changes were made to the rules related to clubbing. In 2003, the Marine Mammal Regulations were amended to require a corneal reflex (“blinking eye”) test to be performed to confirm “death” in seals prior to skinning.

The present-day Canadian seal hunt is conducted by an estimated 5000 to 6000 fishermen, operating from over 1000 vessels measuring less than 65 feet in length by regulation. Many of these vessels are equipped with smaller speedboats and skidoos, with which seal hunters move away from the vessels to hunt seals. Larger vessels are used to collect skins from the smaller boats, but are not allowed to participate in other ways in the implementation of the hunt.

The present-day seal hunt still officially opens on November 15th and closes on May 15th. However, the Minister of Fisheries and Oceans has the option of extending the sealing season for several weeks beyond the closing date—one he has exercised each year in recent history. Because seal hunters are now targeting slightly older seals, the vast majority of the seals are now killed at the end of March in the Gulf of St. Lawrence and in mid-April in the “Front” (waters northeast of Newfoundland).

While a number of aspects of the Canadian commercial seal hunt have clearly changed over the years, some behaviours and factors that pertain to humane killing have not. In discussing the potential for Canada’s commercial seal hunt to be made acceptably humane, these elements bear close scrutiny.

Origins of Observation

Government and NGO observation of the Canadian commercial seal hunt has been relatively consistent over the years, and is closely tied to the levels of controversy surrounding the hunt.

One of the first individuals to report inhumane killing at the Canadian seal hunt was Dr. Harry Lillie, a Scottish surgeon who accompanied the sealing fleet as a medical officer in 1949. He was disturbed by the cruelty he witnessed, and he traveled to Ottawa to testify to Canadian government officials. Disappointed by their lack of response, he returned in 1955 to film the seal hunt, and wrote a book about his experiences. Though his film and book achieved only moderate interest, the perceived cruelty involved in the seal hunt had been brought to public attention. (Candow 1989)

In the 1950s, Canadian humane societies began to send observers to the seal hunt, and reports of cruelty increasingly filtered out to the public. In 1964, the seal hunt achieved widespread publicity when a film including seal hunt footage was commissioned and broadcast by the Canadian Broadcasting Corporation. The film included disturbing images of slaughtered newborn pups, and a shocking sequence of a seal appearing to be skinned alive. (Lavigne and Kovacs 1988)

In 1966, Brian Davies observed the seal hunt for the first time as a representative of the New Brunswick Society for the Prevention of Cruelty to Animals. He organized a veterinarian named Elizabeth Simpson to accompany him, and she produced one of the first independent veterinary reports on the commercial seal hunt. Other humane society representatives observed the seal hunt in the same year at the invitation of the Canadian government.

Within three years, Davies had founded the International Fund for Animal Welfare (IFAW) with the mandate of stopping the Canadian seal hunt. Soon, other animal protection and environmental organizations, including the newly formed Greenpeace, began to campaign on the issue. As the years went by, the seal hunt became a lead international story. Pressure on the Canadian government to stop the commercial seal hunt increased exponentially (Lavigne and Kovacs 1988).

Throughout this time, official observation of the seal hunt by humane organizations continued. In 1971, the Canadian government formalized the process by forming the Committee on Seals and Sealing (COSS), an advisory group to the Minister tasked with observing the seal hunt and providing recommendations on making the hunt more humane. The appointments to COSS were political, and included representatives from humane organizations, the Canadian government, and the sealing industry (COSS, 1978). For the next decade, COSS observers attended the commercial seal hunt both in the Gulf of St. Lawrence and the Front each year, observing the hunting and examining carcasses of slaughtered seals.

Some observers of the Canadian seal hunt through COSS included:

- Dr. Harry Rowsell, veterinary pathologist. Chair of the Canadian Federation of Humane Societies and founder of the Canadian Veterinary Medical Association
- Tom Hughes, Executive Director of the Ontario Humane Society
- John Walsh, representative for the International Society for the Protection of Animals (ISPA) the World Society for the Protection of Animals (WSPA) and the Flora and Fauna Society (FFS).
- Colin Platt, biologist. Field Director for the International Society for the Protection of Animals.
- Trevor H. Scott, Executive Director of ISPA and Director General of the World Society for the Protection of Animals
- G.B. Taylor, representative for ISPA
- Dr. William Jordan. Veterinarian. Royal Society for the Prevention of Cruelty to Animals.
- Professor Reginald Thompson. Veterinary Pathologist. Head of Pathology, University of Guelph.

Additionally, a number of NGOs facilitated observation of the seal hunt. Some observers who observed the seal hunt independently of COSS include:

- Brian Davies. Representative for the New Brunswick SPCA and founder of the International Fund for Animal Welfare.
- Dr. Elizabeth Simpson, veterinarian.
- Paul Watson. Representative for Greenpeace and founder of the Sea Shepherd Conservation Society.

Following the 1983 prohibition in the European Union of products from “whitecoat” and “blueback” seal pups, official observation of the Canadian seal hunt declined along with the number of seals killed. In the mid 1990s, seal hunt landings increased again, as did regular observation of the commercial seal hunt. IFAW resumed annual documentation of the seal hunt in the 1990s. Facilitated by the Canadian government, representatives of the Canadian Veterinary Medical Association (CVMA) observed the seal hunt in 1999, and then again in 2001 with fisheries officers. In 2001, an independent panel of veterinary experts observed the seal hunt in the Gulf of St. Lawrence with IFAW. In 2005, the Humane Society of the United States (HSUS) began to observe and document the seal hunt and has done so each year since.

Humane Slaughter and Canada's Commercial Seal Hunt

To perform a useful review of the veterinary evidence related to the Canadian seal hunt, it is important to first develop an understanding of what humane slaughter might mean in the context of this industry.

In Canada, two pieces of legislation pertain to humane killing at the commercial seal hunt. The Criminal Code of Canada, Section 446, states, "Every one commits an offence who willfully causes or, being the owner, willfully permits to be caused unnecessary pain, suffering or injury to an animal or a bird". Given the difficulty in proving intentional cruelty in animal use industry in Canada, the Criminal Code is rarely (if ever) applied to the actions of sealers.

The operation of the sealing industry is more directly governed by the Marine Mammal Regulations (MMRs), which are overseen by the Canadian Department of Fisheries and Oceans. The sections of the Regulations that pertain to humane killing of seals are:

- 8.** No person shall attempt to kill a marine mammal except in a manner that is designed to kill it quickly.
- 9.** No person shall fish for a marine mammal without having on hand the equipment that is necessary to retrieve it.
- 10.** (1) No person who kills or wounds a marine mammal shall
 - (a) fail to make a reasonable effort to retrieve it without delay; or
 - (b) subject to section 33.1, abandon or discard it.
- 27.** No person other than a beneficiary shall sell, trade or barter a whitecoat or blueback.
- 28.** (1) No person shall fish for seals, for personal or commercial use, in any of Sealing Areas 4 to 33 except with
 - (a) a round club made of hardwood that measures not less than 60 cm and not more than 1 m in length and that, for at least half of its length, beginning at one end, measures not less than 5 cm and not more than 7.6 cm in diameter;
 - (b) an instrument known as a hakapik, consisting of a metal ferrule that weighs at least 340 g with a slightly bent spike not more than 14 cm in length on one side of the ferrule and a blunt projection not more than 1.3 cm in length on the opposite side of the ferrule and that is attached to a wooden handle that measures not less than 105 cm and not more than 153 cm in length and not less than 3 cm and not more than 5.1 cm in diameter;

(c) a rifle and bullets that are not full metal-jacketed that produce a muzzle velocity of not less than 1,800 feet per second and a muzzle energy of not less than 1,100 foot pounds; or

(d) a shotgun of not less than 20 gauge and rifled slugs.

(2) Every person who strikes a seal with a club or hakapik shall strike the seal on the forehead until its skull has been crushed and shall manually check the skull, or administer a blinking reflex test, to confirm that the seal is dead before proceeding to strike another seal.

(3) If a firearm is used to fish for a seal, the person who shoots that seal or retrieves it shall administer a blinking reflex test as soon as possible after it is shot to confirm that it is dead.

(4) Every person who administers a blinking reflex test on a seal that elicits a blink shall immediately strike the seal with a club or hakapik on the forehead until its skull has been crushed, and the blinking reflex test confirms that the seal is dead.

29. No person shall start to skin or bleed a seal until a blinking reflex test has been administered, and it confirms that the seal is dead.

While on the surface, the Regulations appear to provide some level of protection for seals, an evaluation of internationally accepted guidelines on humane slaughter show that they fail absolutely to prescribe a humane death for seals.

Most recognized, modern guidelines on humane killing are fairly consistent in suggesting that humane euthanasia should be comprised of three steps:

- (1) minimizing stress experienced by the animal prior to slaughter,
- (2) rendering the animal immediately unconscious, and
- (3) providing a recognized method of euthanasia to the animal

The Canadian Veterinary Medical Association (CVMA) position statement on euthanasia states:

“When animals are killed for food, humane necessity, or any other reason, their death must be quick and cause the least possible pain and distress... The animal must be rendered irreversibly unconscious as rapidly as possible with the least possible pain, fear, and anxiety. The preferred methods used to achieve this are those that affect the brain first, followed quickly by cessation of cardiac and respiratory function. The experience, training, sensitivity, and compassion of the individual carrying out the procedure are critical.” (CVMA 2007)

The American Veterinary Medical Association (AVMA) *Guidelines on Euthanasia* (2007) states:

“Euthanasia techniques should result in rapid loss of consciousness followed by cardiac or respiratory arrest and the ultimate loss of brain function. In addition, the technique should minimize distress and anxiety experienced by the animal prior to loss of consciousness” (1).

As noted in the *Opinion of the Scientific Panel on Animal Health and Welfare on a request from the Commission related to welfare aspects of the main systems of stunning and killing the main commercial species of animals* (2004):

“Stunning before slaughter is a statutory requirement in the EU (with exceptions in some Member States for religious slaughter) to induce unconsciousness and insensibility (inability to perceive stimuli) in animals, so that slaughter can be performed without avoidable fear, anxiety, pain, suffering and distress.” (1)

The Canadian Council on Animal Care (CCAC) states in its *Guidelines on the care and use of wildlife* that,

“One of the most important criteria of acceptance of a euthanasia method as humane is that it have an initial depressive action on the central nervous system to ensure immediate insensitivity to pain; this must be followed by cardiac and respiratory arrest” (42).

AVMA (2007) also states:

“Conditions found in the field, although more challenging than those that are controlled, do not in any way reduce or minimize the ethical obligation of the responsible individual to reduce pain and distress to the greatest extent possible during the taking of an animal’s life.” (19)

H. Rowsell took an even stronger position in 1977. He said, “sealing is, in fact, a slaughter operation and seals should be given the same consideration and concern given to domestic animals in the abattoir” (2).

In its report, *Improving Humane Practice in the Canadian Harp Seal Hunt*, the “Independent Veterinarians’ Working Group (IVWG)” (2005), recommends that

“Hunters follow a basic three-step process -- stunning, checking (palpation of the skull) and bleeding -- that, when carried out correctly by a trained individual, will result in rapid, irreversible loss of consciousness, and death” (7).

Burdon et al (2001) recommended a process of

“rapid stunning (resulting in a rapid loss of consciousness), followed immediately by a bilateral corneal reflex check to assess loss of consciousness,

followed immediately by bleeding out to ensure death occurs, are followed in order to reduce these levels of suffering” (1).

While the two reports disagree on the method of testing for unconsciousness, they both recommend that humane killing at the seal hunt should include the following three step process:

- Stunning
- Confirmation of unconsciousness
- Exsanguination

Stunning

In the Marine Mammal Regulations, both clubbing and shooting are identified as killing methods. However, IVWG (2005) equates death with termination of brain stem function, which “cannot always be guaranteed by hakapik strike or rifle shot alone” (13).

Burdon et al (2001) note:

“Diffuse and severe damage only to the cerebral cortices can result in significant disruption of the ascending reticular activating system, resulting in unconsciousness, which may be temporary i.e. conscious sensation may return. A large blow to the cerebral cortex is unlikely to result in immediate brain stem herniation...Massive cerebral haemorrhage associated with a blunt external trauma would be unlikely to occur and result in immediate death.” (4)

The evidence clearly suggests in evaluating humane slaughter methods in the commercial seal hunt, clubbing and shooting should be viewed as stunning methods only.

The Marine Mammal Regulations require that in cases where seals are clubbed, sealers must strike a seal on the forehead until the skull is crushed. However, the regulations fail to mandate that the stunning must be achieved with a single blow. Burdon et al (2001) state,

“We believe that multiple blows or shots to an individual seal, is not acceptable from an animal welfare point of view” (1). AVMA (2007) notes that when clubbing animals, “A single sharp blow must be delivered to the central skull bones with sufficient force to produce immediate depression of the central nervous system” (17).

Thus, the Regulations should require sealers to crush a seal’s skull in one blow. Moreover, in 1973, H. Rowsell stated that, “our observations make us conclude that the bat for the size of animal being killed, i.e. the beater, is not the most humane method of killing...” (4). Accordingly, the Regulations should prohibit the use of wooden bats as killing implements in the present-day hunt.

In instances where seals are shot, the Regulations do not specify that the seals should be shot in the head. The Canadian Council on Animal Care states in their Guidelines on the Care and Use of Wildlife (2003) that:

“While a shot to the brain of an animal produces a quick and humane death (Longair *et al.*, 1991), it is best attempted when the animal is immobilized by injury or physical restraint. In free ranging situations, a successful shot to the brain may be difficult to achieve and can result in accidental injury to the animal.” (43)

However, shooting animals in any region other than the head does not fit within accepted humane slaughter guidelines. AVMA (2007) states:

“Shooting should only be performed by highly skilled personnel trained in the use of firearms...For wildlife and other freely roaming animals, the preferred target area should be the head...A gunshot to the heart or neck does not immediately render animals unconscious and thus is not considered to meet the panel’s definition of euthanasia.” The report notes that, “under field conditions, it may be difficult to hit the vital target area.” (13-14)

Because they allow seals to be shot in areas other than the head, the Regulations specifically do not require immediate stunning in animals that are shot. Moreover, the Regulations only require that sealers should perform a test for unconsciousness on seals that have been shot “as soon as possible” (Part IV, article 28. 3).

If shooting is to be an accepted “stunning” method in the commercial seal hunt, the Regulations must require sealers to shoot seals in the head with one shot.

Testing for unconsciousness

The Marine Mammal Regulations state that sealers must perform a corneal reflex or skull palpation test to ensure death in seals prior to cutting or skinning them. However, studies show neither of these tests is appropriate for indicating irreversible unconsciousness, let alone death.

Daoust et al (2002) note that sheep and calves stunned with non-penetrative percussion lost their corneal reflex, which returned together with the righting reflex within 20 seconds to two minutes. This indicates clearly that loss of corneal reflex should not be used as a sign of irreversible unconsciousness, let alone death. Burdon et al (2001) state:

“A large blow to the cerebral cortex is unlikely to result in immediate brain stem herniation. Cerebral oedema can elicit herniation but only after a considerable time period (potentially hours). Massive cerebral haemorrhage associated with a blunt external trauma would be unlikely to occur and result in immediate death. Therefore, skull palpation is not the most reliable as a means of interpreting death

or level of consciousness. The location and severity of crush injuries involving the CNS will affect the possible outcome; it is therefore open to misinterpretation.” (4)

According to neurology and veterinary experts, intense or painful stimulation can restore consciousness (RSPCA 1978). It seems entirely possible that some seals may regain consciousness when they are dragged across the ice with hooks or when they are being skinned. Certainly veterinary and video evidence of the seal hunt in recent years proves this is the case.

Moreover, effective application of corneal reflex tests within the challenging physical environment of the seal hunt may not always be possible. The AVMA *Guidelines for Euthanasia* (2007) note that “with stunning, evaluating loss of consciousness is difficult” (17). Scott (1977) observed the seal hunt from vessels upon which sealers were shooting at seals. He noted, “during the operation it became apparent that the eye reflex of the beater seals was not easy to ascertain” (2). The IVWG (2005) state:

“The process for checking the corneal reflex is not simple, and can be very difficult to perform by a sealer on the ice...the Group does not feel that the absence of corneal reflex can be checked with sufficient care and skill to make it an effective means of determining successful stunning.” (16, 21)

While the IVWG (2005) recommends skull palpation as the best test of unconsciousness, it must be noted that this test is also unreliable, given not all skull fractures would cause unconsciousness in seals. The very thick material of sealers’ gloves could be an impediment to accurate application of this test. In cases of shooting (the method by which the majority of seals are slaughtered in Canada), a skull palpation test would be largely inappropriate.

When seals are shot at from great distances—estimated at 40 to 50 metres by the IVWG (2005) and shown to be even greater in IFAW and HSUS seal hunt footage from recent years—there is an unacceptable delay in seal hunters maneuvering their vessels into position to retrieve the seals. In some cases, video evidence shows ice sufficiently thin and broken that the sealer is unable to stand on the pan to perform a test for unconsciousness. In these cases, the only option for the sealer is to impale the seal on a gaff, drag the seal across the ice, and then hoist the animal on board the vessel. Certainly this does not fit within accepted guidelines of humane slaughter; Burdon et al (2001) stated, “any method of taking a seal which requires the seal to be recovered by gaffing or hooking before the process can be followed, can never be humane” (6).

In conclusion, while they may serve as an indication of unconsciousness if effectively applied by a trained seal hunter, corneal reflex and skull palpation tests should never be used to identify irreversible unconsciousness. Given the challenges of effectively applying these tests in the field environment of the commercial seal hunt, they should not in this context be considered guarantees of unconsciousness.

Neither test should ever be interpreted, as the Marine Mammal Regulations have, to be evidence of death. Moreover, the ability to perform these tests immediately following injury to the seal is key—and in a very large proportion of cases this would be impossible in the commercial seal hunt.

Exsanguination

The Marine Mammal Regulations do not currently require sealers to bleed out seals prior to hooking, dragging or skinning—a critical step included in most humane slaughter guidelines when methods of stunning are reversible.

For example, the Canadian 1990 Meat Inspection Regulations require every food animal being slaughtered to be rendered unconscious and then bled. While the Canadian government describes the commercial seal hunt as “primarily a fur hunt” (Jones 2006), this should in no way mitigate the obligation of the industry to follow humane slaughter procedures. Burdon et al (2001) recommended sealers be made to comply with the 1990 Meat Inspection Regulations, stating,

“If the Canadian commercial seal hunt is to be considered as an “industry”, it is imperative that every effort is made to comply with these animal production regulations. It is quite clear from our personnel observations that the present seal hunt fails to comply with these basic animal welfare regulations.” (2)

EFSA (2004) states,

“Stunning methods induce temporary loss of consciousness and rely solely on prompt and accurate sticking procedures to facilitate bleeding and to cause death. Sticking involves the severing of major blood vessels e.g. neck cutting or chest sticking. If unbled, even the adequately stunned animal has a potential to regain brain and body functions. Stun / killing methods induce unconsciousness and death either simultaneously or sequentially.”

Burdon et al (2001) and the IVWG (2005) include immediate exsanguination, following confirmation of unconsciousness, as the appropriate euthanasia method at the seal hunt. According to the World Organization for Animal Health (WOAH) *Guidelines for the Slaughter of Animals* (2006), “from the point of view of animal welfare, animals which are stunned with a reversible method should be bled without delay” (Article 3.7.5.7.5). Thus, sealers should be required to immediately exsanguinate seals upon confirmation of unconsciousness.

Re-stunning if Necessary

There is significant evidence that seals that are shot or clubbed are not always immediately stunned. For example, Daoust et al (2002) report in 26 percent of cases observed in which seals were shot, the seals were subsequently clubbed. HSUS footage

from 2007 shows a significant number of shot seals that were still responding to pain as they were impaled on gaff hooks. In cases of clubbing, many post-mortem studies show a high percentage of carcasses with only partial fractures or even no fractures (Simpson 1966; Jordan 1978; Rowsell 1978; Burdon et al 2001). It appears likely that a significant number of seals may be conscious when the sealers perform corneal reflex or skull palpation tests.

The potential for tests of unconsciousness to be inaccurately performed in the context of the seal hunt, paired with the reality that neither test confirms irreversible unconsciousness necessitates a fourth step in humane killing at the commercial seal hunt—re-stunning the seal if needed during exsanguination.

AVMA (2007) stipulates that exsanguination can be used to ensure death subsequent to stunning, or in otherwise unconscious animals but that it must not be used as a sole means of euthanasia. Thus, it is imperative that the sealer be on hand with appropriate equipment to ensure if the seal regains consciousness, the animal can be stunned again. Notably, in situations where a reversible method of stunning is used, the WOA (2006) guidelines state, “It should be possible for staff to observe, inspect and access the animals throughout the bleeding period. Any animal showing signs of recovering consciousness should be re-stunned” (Article 3.7.5.7.5).

Thus, in conclusion, a four step process would be required for a humane kill at the commercial seal hunt:

- Stunning with one blow or shot to the head
- Immediately testing for unconsciousness
- Immediate exsanguination
- The sealer remaining with the seal throughout the bleeding process and re-stunning if required

Moreover, as recommended by the IVWG (2005), “seals should not be shot in water, or in any circumstance when it is possible the carcass cannot be recovered” (2).

While this four step procedure may come close to adhering to accepted humane slaughter guidelines in theory, one must question whether it is realistic to imagine that they can occur in the context of the Canadian commercial seal hunt. Indeed, there is good reason to believe this four step killing process would not be effectively and consistently carried out in the physical environment in which the Canadian seal hunt takes place.

Moreover, the need for sealers to deliver accurate head shots to the seals with one bullet, and the recommendation that sealers not shoot seals in the water or in circumstances where a carcass may not be recovered, would in theory remove almost all shooting from the commercial seal hunt if these guidelines were to be observed.

Problems with Veterinary Methodology

A number of veterinary studies performed over the years on the commercial seal hunt have employed questionable methodology. In evaluating the resulting reports, it is important to consider how they arrived at their conclusions.

1. Methods of observation

The vast majority of veterinary and humane society observation that has occurred at the commercial seal hunt has been facilitated and coordinated by the Canadian government (Rowse 1971-1982; Walsh 1966-1981; Platt 1969-1981; Scott 1966-1981; Daoust et al 1999-2001). Because the veterinarians and observers involved are escorted to the seal hunt area by fisheries officers, their observation occurs a) when sealers are aware of the observation and its purpose, and b) in the company of fisheries officers.

This is a potentially problematic way of evaluating killing methods at the commercial seal hunt. Logically, the visible presence of enforcement officers (who in theory could charge seal hunters with violating regulations) would alter the behaviour of sealers. Moreover, sealers' awareness that a study on the humane aspects of the seal hunt was being conducted would surely also cause them to improve their methods of killing throughout the observation. As Hughes (1977) noted, "it would only be human nature for the sealers to be 'on their best behaviour' [in the presence of official observers]" (6). Daoust et al commented on Dr. Daoust's observations of the 2001 seal hunt, "His presence on board of sealing vessels may have incited sealers to hit the seals' skulls more vigorously" (692). It should be noted that despite the sealers performing under open scrutiny of enforcement officers and the observers, most reports still show a considerable and unacceptable degree of suffering.

Perhaps not surprisingly, veterinary observation that has occurred in absence of participation from the Canadian government reveals a far higher degree of cruelty at the seal hunt. Simpson reports (1967) that:

"As I moved away from the area in which we had landed and had been observed by the sealers and into areas where the seal pups had been killed prior to our arrival on the ice floe, I found a much higher percentage of skulls which were not fractured. In one small area I examined 12 carcasses of which all had unfractured skulls...In all of the 124 carcasses examined [on this floe]...there were 50 unfractured skulls and 74 fractured skulls, of the 74 fractured skulls one had been fractured after death..." (10)

The use of wescam lenses (high powered lenses mounted on helicopters) allowed Burdon et al to observe the 2001 seal hunt without sealers being aware of the observation. Their report showed of the 127 seals they observed being killed, only 7 were stunned, checked for unconsciousness and then bled.

2. Cranial hemorrhage as an indication of immediate or irreversible unconsciousness

Throughout much of the 1970s and 1980s, Dr. Harry Rowsell performed numerous post mortems on carcasses of seals that had been clubbed or shot and skinned. Though he found a significant number of the skulls showed little or no fracture, he determined that any evidence of cranial hemorrhage found in these seals would have guaranteed unconsciousness. As a result, many other representatives who performed examinations of seal skulls in that time and found intact skulls, were assured that the animals had not suffered (and in turn reflected this in their findings).

Dr. Rowsell's approach was flawed. Veterinary pathologists consulted by the author note that even in cases of massive cerebral hemorrhage, unconsciousness is not guaranteed. Moreover, even if the animal was rendered unconscious, there is no guarantee the unconsciousness would have been instantaneous. Thus, in cases when the seals' skulls were not crushed, Dr. Rowsell had no way of knowing if the seals were unconscious during the hooking, dragging, bleeding or skinning processes.

This problematic approach was countered by Dr. William Jordan of the Royal Society for the Prevention of Cruelty to Animals (RSPCA) in 1978. An RSPCA report based on Dr. Jordan's findings notes that three eminent British neurological surgeons and a veterinary authority on slaughter techniques all pointed out that "it is well known to every medical student that even quite a large brain haemorrhage in humans may not cause unconsciousness; or that the victim can regain consciousness very quickly" (3). The report goes on to state that in the opinion of these experts, "It is also well known that intense or painful stimulation can restore consciousness and it seems possible that some seals may regain consciousness when they are dragged across the ice or while they are being skinned" (3).

3. Crushed skulls as evidence of unconsciousness or death at the time of skinning

Throughout the 1960s, 1970s and 1980s, reports indicate the presence of veterinarians and humane society observers on the ice floes was well known to sealers. During this time, a number of official observers reported a disturbing practice of both seal hunters and fisheries officers, designed to prevent accurate examinations of seal skulls. In the opinion of some observers, this behaviour could have skewed results of the numerous skull examinations performed at the seal hunt.

In 1968, T. Hughes observed the seal hunt on behalf of the Ontario Humane Society. He noted:

"The number of skulls which had been completely crushed was higher than in the previous year. This is not, however, entirely satisfactory proof that the animals skulls were crushed before the animals were skinned. On at least one occasion, I watched a sealer club the animal, skin it and as he was leaving the scene, stamp on the animal's skull, with the heel of his boot, smashing the skull. In other

words, from a practical law enforcement point of view, and Fishery officer viewing that particular skull, would naturally conclude that the skull had been crushed before skinning had taken place, whereas, in point of fact, it occurred afterwards!” (5)

He continued, “It is a fairly common practice to hit them on the head with the club after they have been skinned, or as I mentioned earlier, to stamp on the skull” (9).

In 1979, H. Rowsell recommended, “There should be an attempt to stop the practice of the sealer in the Gulf crushing the skulls of seal pups after pelting” (4). In 1985, he testified to the Royal Commission on Seals and the Sealing Industry, “we did know that in later years that there was a practice of some sealers stepping on the skull of the animal after the pelt was removed to produce the effect that the skull had been crushed during the operation” (11).

4. Lack of consistent definitions for humane killing

Over the years, accepted principles on humane slaughter techniques have evolved. Behaviours that might have been perceived as “acceptably humane” decades ago would not be according to current information. To further complicate matters, definitions of humane slaughter used by veterinarians and animal welfare experts who have observed the seal hunt have also varied according to the observer.

Because of this lack of consistency in defining humane killing, some observers indicated they found the seal hunt to be conducted in a humane fashion, even as they reported repeated examples of sealers:

- clubbing and shooting seals with illegal and ineffective weapons
- clubbing seals with multiple blows
- failing to crush the skulls of the seals they clubbed
- failing to kill seals with one shot to the head
- leaving seals that had been shot for extended periods of time prior to retrieving them
- failing to test seals for unconsciousness before hooking, dragging, bleeding or skinning
- failing to exsanguinate seals
- shooting at seals in open water and allowing the seals to escape, and
- impaling conscious seals on metal hooks, dragging them across the ice and winching them on board sealing vessels.

Evidence of Inhumane Killing

While the Canadian seal hunt has changed in terms of its focus and operation, there are consistent and problematic behaviours exhibited by seal hunters over the past five decades that are relevant in the context of the present-day hunt.

It is important to consider that many of the seal hunters observed decades ago are still hunting seals today. Moreover, seal hunters are trained through apprenticeship, meaning the younger sealers operating today have been taught by those of the previous generation.

The problematic behaviours detailed below have persisted in the face of regular training sessions and information brochures provided to sealers, recommendations made by government appointed observers, and multiple improvements to regulations.

Prior to 1987, the primary target of the commercial seal hunt was the whitecoat (newborn) harp seal pup. Today, hunters kill pups when they are a few weeks older. Thus, as we evaluate studies and reports from decades ago, we should consider that the biological differences in older seal pups provide even greater challenges to humane killing today. These include:

- The skulls of older seal pups are even thicker than those of newborns, and therefore more difficult to crush
- Older seal pups are more aware and mobile, and can move fairly quickly across the ice
- Some older seal pups are able to swim and dive to escape

The evidence clearly shows unacceptable levels of suffering in newborn seals hunted prior to 1987. Given the factors above, one can conclude this suffering occurs as much or more today. As noted by Walsh in a 1983 report, “The possibility of suffering with the taking of beaters, either in open water or on small pans of ice by small fishing boats is great” (4). Not surprisingly, present-day veterinary evidence and humane society observation has revealed significant levels of suffering in the current incarnation of the commercial seal hunt.

1. Failure to crush skulls when clubbing

While the skulls of the “ragged jacket” and “beater” harp seal pups hunted today are thicker than those of newborn harp seals killed in previous decades, the weapons used to club seals are the same. One can only conclude that if seals’ skulls were not being consistently crushed prior to 1987 using these implements, the likelihood of this problem existing today may have increased.

According to the chapter in the 1986 Royal Commission on Seals and Sealing report, *Methods of Killing Seals*, it is possible in theory for a sealer to render a seal unconscious with a blow to the head by a club, and then immediately exsanguinate the

seal. But, according to the authors, “the difficulties arise from the actual conditions under which the seal hunt is conducted” (16). They note:

“Clubbing is a physical act, and the clubber must strike every blow with precision to ensure humane clubbing. It is probably impossible to invariably achieve this precision, given the cold and slippery conditions on the ice, the long hours, the pressure to work fast, and the possibility of a moving target.” (16)

Platt (1970a) observed the clubbing of seals in Canadian waters with hakapiks, performed by Norwegian hunters. He found that when seals were alarmed by the approach of a seal hunter, two distinct and completely separate reactions would result. These included:

(1) “The seal would attempt to escape but after a short distance (two to three meters) would stop and raise its neck and head into an almost vertical position.

(2) “The seal would freeze (play possum) with head withdrawn and protected by a large, loose fold of blubber that enveloped all but the anterior part of the face. The caudal limbs would be in a state of tension and overcrossed protecting the genitals.” (3-4)

In these cases, Platt (1970a) found that “examination of skull damage after skinning, invariably revealed damage entirely confined to the facial bones, or to the anterior aspect of the cranial bones, i.e. in the case of (1) destruction of the incisive or nasal bones and in (2) the upper aspect of the orbital cavities” (4).

He noted three types of reaction in seals that showed little or no injuries to the vulnerable regions of the cranial bones:

- i. “A swimming motion involving the posterior half of the body and the caudal limbs. Examination of the skull after skinning invariably revealed facial, orbital or superficial cranial damage.
- ii. “A swimming motion involving the caudal limbs only, with the head and body in a relaxed state. This motion has been observed on seals showing massive destruction of the bore-brain.
- iii. “An up and down, or side to side movement of the neck and head. In this event neither of the two swimming motions were observed at the same time.” (4)

Platt (1970a) concluded that “in the case of (i) the seal was usually in a state of semi-consciousness; in (ii) unconscious, and in (iii) fully conscious” (4). Disturbingly, Platt (1970b) goes on to note in a separate report on Norwegian sealers in the same year,

“Sealers did not comprehend that exsanguination is an integral part of the killing procedure and not of skinning. As the sealing regulations make this fact perfectly clear, infringements of the law in this respect were constantly taking place from every Norwegian ship I observed.” (13)

E. Simpson noted the same behaviours in seals as they were being clubbed during the 1967 seal hunt in the Gulf of St. Lawrence, and reported,

“...roughly one half of these young seals reacted to the close presence of a human being by attempting to escape by moving away over the ice, whilst half of them would “play possum” by flexing both fore and hind flippers, flexing the spine and withdrawing the head into the neck, thus bringing an extra thickness of skin and blubber over the head region.” (2)

Video evidence shows the behaviours observed by Simpson and Platt are routinely exhibited by seal pups that are clubbed today by Canadian sealers.

In keeping with Platt’s findings, a consistent lack of cranial injury was also found during examinations of the skulls of seals clubbed by Canadian seal hunters both in the past and present-day hunts (Hughes 1966; Simpson 1967; Scott 1971; Scott 1977; Jordan 1978; Taylor 1979; Rowsell 1980; Hughes 1981; Daoust et al 2002; Burdon et al 2001).

Hughes (1966) observed the commercial seal hunt in the Gulf of St. Lawrence along with representatives of ISPA, the Canadian SPCA, the St. John’s SPCA, the Riverdale Zoo (Toronto) and the Canadian Audubon Society. Hughes reported that the group was able to examine the skulls of many carcasses of young seals and stated, “We noted that a number of the dead animals had not suffered any damage to the skulls and we were unable to satisfactorily determine whether these animals had been rendered unconscious by any other means prior to skinning” (1). In his report from the same observation trip, Walsh stated, “On March 9, I viewed ten live seals that had been struck by clubs. Some of them were alive and suffering one-half hour after being struck” (1).

Simpson (1967) observed the commercial seal hunt and conducted post mortems on 154 seal carcasses. Her report published in *Nature* showed that only 64 percent of the total had fractured crania. Of those, ten showed extensive haemorrhage and bruising in the ventral cervical region, suggesting that blows to the throat had been given before death. The remaining 36 percent – 56 carcasses - did not have fractured crania. Thirty eight of these had soft tissue damage to the dorsal head and neck region, and thirteen had fractured nasal bone, indicating that blows had been delivered either inaccurately or with insufficient force to fracture the cranium. There were four carcasses which showed signs of ante-mortem injury to the ventral cervical region indicating that the animals had received a blow or blows on the throat before death. Five carcasses showed no sign of injury apart from skinning. In conclusion, Simpson stated, “These post mortem findings suggest that a large percentage of the hunted animals die in a manner which is of doubtful humanity.” (1264)

Hughes (1968) observed the seal hunt in the Gulf of St. Lawrence. While he noted, “The number of skulls which had been completely crushed was higher than in the previous year,” (5) he went on to say,

“This is not, however, entirely satisfactory proof that the animals skulls were crushed before the animals were skinned. On at least one occasion, I watched a sealer club the animal, skin it and as he was leaving the scene, stamp on the animal’s skull, with the heel of his boot, smashing the skull. In other words, from a practical law enforcement point of view, and Fishery officer viewing that particular skull, would naturally conclude that the skull had been crushed before skinning had taken place, whereas, in point of fact, it occurred afterwards!” (5)

Scott (1971) observed the seal hunt in the Gulf of St. Lawrence. He noted:

“There were a number of infractions of the Regulations this year and in the first few days 22 licenses were suspended by the Fisheries Officers, mainly because of the killing, which did not meet the stated criteria of the skulls being properly crushed. I was to find during my observations on the hunt that many skulls were not crushed properly, that is some were crushed low down over the nasal bone, others were not crushed at all.” (5)

He continued, “I found a baby seal pup which had no mark whatsoever on its skull but upon the throat of which was extensive haemorrhaging. The signs indicated that this seal had been killed by clubbing of the throat...” (6).

Disturbingly, Scott (1971) recorded a similar behaviour to one witnessed by Hughes in 1968. Scott reported, “For example, there was an incident when Field Officer Walsh saw a Fisheries Protection Officer deliberately crush an apparently uncrushed skull and before animal welfare workers reached it” (7).

Terhune (1974) acted as an official observer for the Committee on Seals and Sealing (COSS) at the Gulf of St. Lawrence seal hunt. Of 57 skulls of clubbed seal pups he examined, six (11 percent) were only partially crushed. Of these, bones in only the nasal and frontal areas were broken.

Jordan (1978) observed the Canadian seal hunt in the Gulf of St. Lawrence, and examined the skulls of 13 seals. He found that a majority (54 percent) had unfractured crania. A report prepared by the RSPCA (1978) based on his findings noted, “Some blows missed the skull and hit the neck...and a report by the Canadian SPCA says that on the evidence of the post mortem, these animals certainly suffered considerably before they died” (3).

Jotham (1978) observed the seal hunt in the “Front”. He reported a disturbing incident:

“Upon picking up the bat he struck a pup with one blow only and moved away to club another pup which he did and promptly skinned it. The first pups meanwhile began to move slowly and managed to slither about 25 feet to an open area before coming to a halt but commenced its swimming motion. John and I were about 30 yards from this scene so could not move in to check the blinking eye reflex and

besides the female had moved in close to her pup. Certainly the pup had not been rendered unconscious immediately.

“The sealer after skinning a seal returned to skin the seal he had struck only once with the bat. He had to chase the female away who charged at him and he did so by striking her with his bat, which is illegal. After skinning that seal he moved away to kill another one and the first female moved aggressively toward him or the next pup and the sealer struck her once again. When Dr. Rowsell joined us the opened up the skull of the seal struck only once with the bat and found only a trace of blood at the base of the brain around the cervical cord.” (6-7)

Taylor (1979) observed the seal hunt in the Gulf of St. Lawrence and produced a report documenting his findings. Though he noted, “it was obvious that the sealers knew we were watching them, and so made sure that the clubbing was as effective as possible”, it was clear from post mortems conducted on seals during his trip that the clubbing was not conducted effectively enough.

During this trip, post mortem examinations of 13 skulls were carried out by Professor Reginald Thompson, Head of Pathology of the University of Guelph. Noting that “in all cases the skin had been removed by the sealer when “‘pelting’ the pup carcass,” his report goes on to detail the results of the 13 post mortem examinations of the seal carcasses (Taylor 1979, 6-7). At least six of the 13 seals (46 percent) did not have crushed skulls.

Rowsell (1980) observed the seal hunt at the “Front” and conducted post mortems on 200 seals. Of these, 75 were carcasses. The remaining 125 were struck at his request in order to establish the efficacy of sealers and the killing instruments (mostly the hakapik). Despite the fact that sealers were aware of the study, and clubbed the seals in the presence of Dr. Rowsell and fisheries officers, 19 (ten percent) of the 200 seals had no or slight fractures. 92 of the 200 (46 percent) are recorded as having “massive” or “severe” fractures, and the remaining seals had varying degrees of cranial injury but not massive fractures or crushed skulls.

Hughes (1981) observed the commercial seal hunt in the Gulf of St. Lawrence. During his trip, he checked the skulls of 100 seal carcasses on the ice. Of these, he found seven (7 percent) that had not been fractured.

In 1983, Hughes produced a report for the Minister of Fisheries and Oceans, detailing the results of his tests on a prototype gun being considered for use at the commercial seal hunt. He stated:

“I became convinced that it is not possible to develop a weapon and ammunition which would be safe under all criteria and yet humanely kill seal pups using the criteria developed by the C.V.M.A. Sealing Committee to test the technique. That criteria simply consists of shooting the animal, once, and leaving it for five minutes, during which time the animal is observed and tested using simple reflex

tests and, if at the end of five minutes there is still no sign of a reflex, then the animal could be bled and skinned. (I would add that this criteria has never been applied to clubs, except on one or two occasions when the results were certainly unsatisfactory. I am convinced that, if the same tests were applied generally to the clubbing of seals, the C.V.M.A. Sealing Committee and, therefore, the C.V.M.A., would not be able to approve clubbing).” (1)

In 1987, the Canadian government prohibited the killing of “whitecoat” and “blueback” seal pups, and the sealing industry switched its focus to slightly older seal pups. However, recent veterinary evidence shows sealers continue to fail to crush seals’ skulls.

Burdon et al studied the commercial seal hunt in 2001. The panel observed seal hunting from the air through high powered Wescam lenses, conducted post mortems on 76 random seal carcasses abandoned on the ice floes, and observed footage of the seal hunt documented by IFAW in 1998, 1999 and 2000. Observations of seal hunting occurred independently of fisheries officers, when sealers were unaware of the observation. From the air (through a wescam lens) the veterinarians observed 70 seals being clubbed. Of these:

- One seal was struck and then lost in the ocean
- 26 seals (37 percent) were clubbed as a group, then left and returned to later
- 23 seals (33 percent) were clubbed, impaled with metal hooks and dragged across the ice or left
- 15 seals (21 percent) were clubbed and bled without a test for unconsciousness, and
- 12 (17 percent) were clubbed and tested for unconsciousness but not bled.

In the IFAW footage, the veterinarians observed 19 seals clubbed by sealers. In 32 percent of these cases the sealer returned for a second strike, meaning the animal was not rendered immediately unconscious. Of the 179 instances captured in this footage showing sealers killing seals by clubbing or shooting, sealers failed to test for unconsciousness in 79 percent of cases. Of the 76 post mortems conducted by the panel, 42 percent did not show enough evidence of cranial injury in the seals to guarantee unconsciousness at the time of skinning.

In 2002, Daoust et al reported on observations of the 2001 seal hunt in the Gulf of St. Lawrence conducted by Pierre-Yves Daoust. Though the results of this study have been wrongly interpreted by the Canadian government as saying that 98 percent of the killing is conducted in an acceptably humane fashion, a review of the report shows this is certainly not the case. Dr. Daoust was stationed on board four sealing vessels during his 2001 study, and observed 167 seals either brought on board the vessel or lost in the ocean. According to his report, about half of the total number of seals were clubbed and half were shot. However, in twelve cases, Daoust failed to observe the method of killing, and was unable to perform an examination of the carcass afterwards.

Of the remaining 155 seal clubbings and shootings which Daoust actually observed (or afterwards conducted an examination of the carcasses), three seals (two percent) were still alive after being brought on board the vessel (he does not indicate if these seals had been clubbed or shot). It is entirely possible the latter animals were impaled on hooks and dragged across the ice before they were hoisted on board the deck of the boat. Another nine (six percent) were clubbed or shot and then lost in the ocean. Five seals (three percent) did not have crushed skulls, and nine seals (six percent) did not have fully crushed skulls.

Video footage from recent seal hunts shows numerous instances of sealers striking animals in the jaw, neck and areas of the body other than the skull, as well as seals responding to pain as sealers begin the bleeding or skinning process. Film of the commercial seal hunt taken in the Gulf of St. Lawrence from IFAW (2004) and HSUS (2005) show wounded, conscious seals left in stockpiles of dead animals for up to 1.5 hours before sealers returned to skin them. These images have been reviewed by a number of veterinary experts, all of whom have concluded the footage shows repeated instances of sealers failing to club seals in a fashion that would cause immediate death or irreversible unconsciousness.

In conclusion, the evidence would indicate that failure of sealers to fully crush the skulls of the pups they are clubbing has been a consistent aspect of the past and present commercial seal hunt.

2. Failure to deliver accurate head shots when shooting

Shooting is a prevalent method of killing seals in Canada, particularly in “the Front”. As ice conditions continue to deteriorate due to the effects of global warming, it is likely that shooting of seals in or near open water will increase in the Canadian seal hunt.

According to the AVMA *Guidelines on Euthanasia* (2007), only a gunshot to the head may be considered a humane method of slaughter. Bonner (1970) advised that seals should be shot in the brain, as shots in the neck or heart were not effective in producing rapid death.

Accurate delivery of head shots can be difficult to accomplish in the wild, given the animals targeted are free ranging. However, in the context of the seal hunt, it is an even greater challenge. The environment in which the hunt operates often consists of strong winds, ocean swells, dense fog, and freezing rain—all obstacles to accuracy in shooting. The Royal Commission on Seals and Sealing stated in their 1986 report, in the chapter *Methods of Killing Seals*, “Many Canadian hunts take place, or have taken place, under conditions which make it impossible to obtain an acceptably high proportion of kills with head shots... The causes include long-range shooting, shooting from moving boats, and shooting at seals in the water” (27).

Reports by veterinarians and humane society representatives over the years have recommended that shooting seals in water is unacceptably inhumane and/or should be made illegal (COSS 1978; IFAW 1998; Burdon et al 2001), and IVWG (2005) suggests that “a seal should not be shot in the water, or in any circumstance when it is possible the carcass cannot be recovered” (2).

Because the ice platform on which the seal hunt occurs has disintegrated because of global warming, seals are inevitably shot at in or near open water. Thus, if the IVWG recommendations were to be adopted, it would be hard to imagine how shooting of seals could be continued in the Canadian commercial seal hunt.

Over the years, the problems with shooting in the context of the commercial seal hunt have been reported consistently.

Platt (1970b) observed the seal hunt conducted by Norwegians in the “Front”. He noted:

“In fairly calm water conditions the marksmen would kill cleanly with the first shot, but during this period gale force winds were blowing. Conditions were bad and not conducive to good marksmanship. It was not uncommon to see three and sometimes as many as five shots fired before the seal was unquestionably dead.” (12)

Rowsell (1976) observed the seal hunt in the “Front”. He studied Canadian landsmen hunters, and his report noted:

“The method of killing requires investigation. There are no figures on numbers of seals shot and number lost and not recovered...they were shot, usually in the water, a practice that cannot be condoned due to inaccuracies of the marksmen, where only wounding would occur, or because of a lack of fat tissue, shot seals sink quickly. It is estimated that as many as 70 percent of seals shot sink before recovery.” (i, 3).

Rowsell (1977) again observed Canadian seal hunters in the “Front”. He performed post-mortems on 76 seals brought aboard the boat, and found in ten cases (13 percent), the seals were not rendered immediately unconscious. Of these, one male seal was wounded with a bullet in the water, then dragged out of the water with a boathook, clubbed with the boathook, and then clubbed once more with a gaff (an illegal weapon at the time). Another male was still alive after being brought on board and was then clubbed with a gaff (an illegal weapon). A female seal was shot in the neck but not killed, and haemorrhaging in the trachea and lungs indicated the likelihood that this animal suffocated in blood. Another female seal was brought on board the ship and was still alive and able to raise her head and move around and had a blinking reflex. She was then clubbed with a mallet (an illegal weapon). A male seal was shot and wounded, and died of blood loss. A female seal that was brought on board still had a blinking reflex and was clubbed three times with a gaff (an illegal weapon). A post mortem later confirmed there

was no fracture in her skull after skinning, and blood was found in her lungs. Another female seal exhibited a blinking reflex after being brought on board the vessel and was clubbed with a gaff (an illegal weapon). A male seal was shot and wounded, and the post mortem revealed blood in his lungs. A male blueback seal was shot and wounded and post mortem findings indicated he bled to death. It is important to note that any seal still conscious after being brought on board vessels would almost certainly have been impaled on a hook, dragged across the ice and winched on board the vessel, which would have caused intense and prolonged pain and distress to the animals.

In a 1979 report, Rowsell refers to his 1978 observations, in which he found seven percent of adult hooded seals still exhibiting a blinking reflex after being shot and brought on board the vessel (almost certainly after having been impaled on a hook, dragged across the ice and winched on board the vessel).

Walsh (1981) observed the seal hunt in the “Front”. He reported:

“...my greatest surprise this year was the lack of concern displayed by those shooting seals on the Lady Johnson II. Captain Morrissey Johnson has traveled to many cities in the USA and Europe defending the seal hunt as being humane. I was under the impression that his vessel was going to be exemplary for humaneness in killing seals. I was wrong.

“In the late afternoon of March 20th, I noted an adult hooded seal that had been shot and left, clubbed (by hakapik), and winched aboard. Those clubbing the seal had difficulty as the animal was wounded and conscious. After a great effort the seal was finally killed...

“...I observed the seals that were shot close to the Lady Johnson II. Three of the seals closest to the ship, which had been shot, were clearly not dead. The first one I noticed from the bow as the adult male was still moving his head about obviously conscious with blood dripping on the ice. I called this seal to the attention of Fisheries Officer Smith. He yelled to sealers working on the other side of the ship and asked that they come around the ship and finish killing this animal. The sealers had been directed by the Captain to go ahead of the ship and were unwilling to assist. Fisheries Officer Smith then moved swiftly and I believe he or the Captain arranged for somebody to immediately dispatch that seal.

“I noticed two more wounded adult males that required repeated blows with a hakapik before they were dead. Another male was shot twice at close range but remained conscious and attempted to attack sealers as they continually struck the animal with a hakapik. On one occasion the hakapik stuck in the seal’s head as he fought off the sealers.” (10)

Following the 1987 prohibition on the killing of whitecoats and bluebacks in Canada, sealers switched their focus to slightly older seal pups. Today, almost all (97 percent, according to Canadian government figures) of the seals killed are between two

and twelve weeks of age. Shooting these more mobile seal pups presents a number of challenges, not the least of which is the ability of some of these juveniles to swim and dive to escape.

In 2001, Burdon et al reviewed footage of the commercial seal hunt documented by IFAW in 1998, 1999 and 2000. 179 seals were observed hunted in the footage. According to their report, 96 seals were shot, and 56 seals were shot and then clubbed or gaffed. The report went on to point out that “in 40% of cases (32% of the clubbed seals and 92% of the shot seals) the hunter returned to strike the seal for a second time (average time to second strike 27 seconds)” (9). The authors stated, “We assume that the reason for this action is that the hunter believed that the seal was still conscious. This is clearly unacceptable” (9).

The veterinarians also observed the seal hunt from the air, through a high powered wescam lens. Over their two days of observation through wescam, the veterinarians witnessed a total of 57 seals shot by sealers. Of these, three (five percent) were shot and then lost in the ocean, 21 (37 percent) were shot and then clubbed (indicating the animals were not rendered immediately unconscious), one was shot and not immediately recovered despite signs of life, and 15 (26 percent) were shot and then impaled with hooks and dragged onto the vessels in absence of a test for unconsciousness. Of the latter group, one seal was observed being clubbed on board the boat, indicating the animal was still alive upon reaching the boat. Thus, over 40 percent of the seals the veterinarians observed being shot by sealers were not rendered immediately unconscious. (Burdon et al 2001)

In 2002, Daoust et al reported on observations by Daoust of the 2001 commercial seal hunt in the Gulf of St. Lawrence. Daoust was stationed on four different sealing boats, and observed 167 seals that had been clubbed or shot, and were brought on board the vessels or lost in the ocean. His report indicates about half of the seals were clubbed, and about half were shot. However, in 12 of these cases, he was unable to observe the method of killing or perform an examination of the carcass.

Of the remaining 155 seals, three (two percent) were still alive and conscious after being dragged across the ice and hoisted onto the boats (no indication was given if these seals had been shot or clubbed). Nine seals (six percent) were “struck and lost”, but there is no indication if these seals were shot or clubbed. In 40 cases (26 percent), the seal was shot and then was struck by a club. Assuming that half the 155 seals were shot, this means 52 percent of the seals that were shot were likely not rendered immediately unconscious. Daoust notes in a number of cases he actually observed, the seal was clearly still conscious after being shot, as was evidenced by movements of the head. Logic dictates that a sealer rushing to kill seals will not club seals that have been shot unless there is a reason to do so. (Daoust et al 2002)

The report also provides a review of seal hunt footage provided by IFAW, documented in 2001. IFAW had provided a time log with the footage, and highlighted 55 cases of particular concern to them. 24 of those cases were based on the apparent failure

of the hunter to kill the seal instantaneously with the initial rifle shot. In eight (33 percent) of those 24 cases, Daoust and Crook agreed with IFAW that the seal had not been killed instantaneously. When specifically timed, it was determined an average of 45.2 seconds elapsed between the animal being shot and a sealer killing it with a hakapik, or in once instance, being brought on board without being struck. (Daoust et al 2002)

Dr. Charles Caraguel, a member of the Independent Veterinarians' Working Group (IVWG), testified before the House of Commons in 2006. He stated, "I went to the front in 2006 where they used the rifle, and I saw dirty stuff."

3. Failure to perform tests for unconsciousness in seals

Over the years, sealers have been instructed to test seals for unconsciousness immediately following clubbing or shooting, both in workshops and in brochures distributed with licenses. Moreover, the regulations have consistently required tests for unconsciousness in their various incarnations over the years (Seal Protection Regulations 1964; Marine Mammal Regulations 2003).

According to the chapter in the 1986 report by the Royal Commission on Seals and the Sealing Industry, *Methods of Killing Seals*,

"The testing of the blink reflex as a check on unconsciousness is probably often omitted...It is easy to imagine that the sealers would neglect this check when they were tired or in a hurry, as they usually are, or even when they felt sure that a seal was dead and that no one was watching them." (16)

Observers of the commercial seal hunt have consistently documented sealers failing to apply tests for unconsciousness over the years.

Jordan observed the seal hunt in the Gulf of St. Lawrence in 1978. An RSPCA report based on his findings (1978) noted, "Lack of corneal reflexes, (which would indicate deep unconsciousness), were seldom checked" (3).

Jotham (1978) also observed the commercial seal hunt in the "front". In his report, he stated, "On reviewing the brochure myself, I noted that sealers were advised to check the blinking eye reflex before skinning. I did not see this action taken once in hundreds of killings I witnessed" (6). The same year, Jordan studied the commercial seal hunt in the Gulf of St. Lawrence. An RSPCA report (1978) based on his findings stated, "Lack of corneal reflexes, (which would indicate deep unconsciousness), were seldom checked" (3).

Burdon et al (2001) reviewed seal hunt footage documented by IFAW in 1998, 1999 and 2000. They reported that of the 176 incidents of sealers killing seals included in that footage, sealers failed to apply a test for unconsciousness in the seals in 79 percent of cases.

Daoust et al (2002) reviewed seal hunt footage documented by IFAW in 2001. Daoust et al reported that of the 116 instances of sealers killing seals included in that footage, the sealers failed to apply a test for unconsciousness in 87 percent of cases.

Video footage obtained at subsequent seal hunts by both IFAW and HSUS and reviewed by independent veterinarians show sealers routinely failing to perform tests for unconsciousness after clubbing or shooting seals. In particular, HSUS documented a large number of instances of sealers failing to perform tests for unconsciousness at the 2007 commercial seal hunt; of 71 random instances of seals killed that were filmed, sealers failed to perform tests for unconsciousness in 82 percent of cases (HSUS 2007b).

4. Failure to exsanguinate seals following clubbing or shooting

Platt (1970b) reported on Norwegian seal hunting by hakapik at the “Front”. He noted that exsanguination is an integral part of the killing that must be undertaken immediately following clubbing and spiking. Under no circumstance whatsoever, should skinning commence until exsanguination is complete. He remarked of the Norwegian hunters:

“Sealers did not comprehend that exsanguination is an integral part of the killing procedure and not of skinning. As the sealing regulations make this fact perfectly clear, infringements of the law in this respect were constantly taking place from every Norwegian ship I observed” (13)

Taylor (1979) observed the seal hunt in the Gulf of St. Lawrence. In discussing exsanguination, he said:

“I was disturbed to note the procedure adopted by the sealers was not uniform. In several cases exsanguination was not carried out for several minutes after clubbing. When asked why he did this, one sealer said that he had been instructed to do so by a Fisheries Officer...In some cases the axillaries were not severed; one sealer opened the gut, another the heart. It seemed to me that all sealers did not appreciate that there are two aspects to pup destruction: a) production of unconsciousness by the club, and b) ensuring that the pup is dead as soon as possible by exsanguination.” (3-4)

In his report, Taylor recommended that, “Exsanguination in the manner prescribed by the sealing regulations must be carried out as soon as the animal is clubbed” and that “Exsanguination must be done by severing the axillary blood vessels completely” (5).

Hughes (1980) observed the seal hunt in the Gulf of St. Lawrence, and noted:

“Once again, I saw a number of cases in which the seal had not been properly bled and pelted, as required by the regulations...I know from my own observations that a number of seals are being killed (perhaps humanely, I must emphasize) but not bled and pelted immediately, as required by the regulations. I

think it is very important that Provincial Fishery Officers make sure that when the seal has been killed, it must be immediately exsanguinated and pelted” (8).

Hughes observed the seal hunt in the Gulf of St. Lawrence again the following year, and reported, “I observed a number of the sealers hitting a pup with one blow and immediately, without attempting to bleed, driving the hook into the animal’s head, under the jaw, dragging the pup to a central point where, without any further blows, pelting commenced” (5). In his observations from the same expedition, Brown recounts, “The landsmen were ignorant of the need to exsanguinate and had no idea on how to accomplish this task” (2). Also in 1981, Walsh observed the seal hunt in the “Front”. He reported:

“The vessel, I noted, had stopped and harp seal pups which had been clubbed were being dragged on board. These pups had not been bled and there were 6 to 8 other seal bodies on deck amongst skins...The ship’s cable was then passed to the sealers and the seals were winched on board to be skinned. Some were bled before the cables were attached, but most were winched on board without being bled.” (4, 9)

Rowsell, on the same expedition, reported:

“A sealer was observed striking a whitecoat once with a hakapik, then driving the pick into the animal’s skull and dragging it quickly aboard the longliner. At the time no immediate attempt was made to exsanguinate it...On the decks of longliners in the area, the bodies of as many as ten seal pups were observed, none of which had been pelted or showed evidence of exsanguination...”

Following years of observations of the seal hunt, in 1985 Walsh included the following recommendation in a submission to the Royal Commission on Seals and the Sealing Industry, “Immediate exsanguination of the seal pup before the animal is moved” (5).

More recently, Burdon et al (2001) found that the seal was bled immediately where struck in only 6 of 179 examples of killing in IFAW footage documented at the 1998, 1999 and 2000 seal hunts (eight percent of cases). The veterinarians observed the seal hunt from the air through high powered Wescam lenses. They found the seal was bled where struck in only 25 of 127 instances of killing witnessed (20 percent of cases).

In 2002 Daoust et al reviewed footage of the 2001 seal hunt documented by IFAW. They noted that in 87 percent of cases, the sealer failed to perform a test for unconsciousness.

Both IFAW and HSUS have documented repeated scenes of seal hunters failing to exsanguinate seals following clubbing and shooting in recent years. In particular, HSUS documented 71 random cases of seals being killed at the 2007 commercial seal hunt – in

almost all of these, sealers did not exsanguinate the seals where they had been struck (HSUS 2007b).

5. Killing with ineffective and illegal weapons

Over the years, seal hunters have made use of a number of weapons to kill seals – some legal and some not. One of the most traditionally used implements was the gaff, a long wooden pole with a hook at the end. The gaff was convenient for seal hunters because its metal hook allowed them to drag the seal back to the boat or to the skinning area. However, the gaff is not an acceptable killing device because its length makes it awkward for the sealers to deliver a blow to the seal's skull, and its lack of weight makes it difficult to fracture, let alone crush, the skull.

In the 1960s, there was very little regulation of the commercial seal hunt, and seal hunters used a variety of weapons to kill seals Vallee reported of the 1966 seal hunt:

“Three men, armed with knives and one hockey stick broken above the blade had accumulated more than sixty baby seals: some were dead and some were still alive crawling to get away. Fifty whitecoats were dead and showed no sign of having been clubbed; they were belly slit. Ten others had also been slashed but were still alive and the other four had been hit on the skull but had not been skinned.” (4-5)

Regarding the 1968 seal hunt, Hughes stated, “I personally watched hundreds, possibly thousands, of young seals killed by the gaff. The gaff is a somewhat clumsy weapon as a killing or stunning implement. Because of its length it has to be used with two hands” (RSPCA 1978).

In the 1970s, regulations prohibiting the use of certain killing implements (including the gaff) were adopted (Seal Protection Regulations 1972), but killing with the now illegal weapons continued.

Rowsell (1977) reported on the seal hunt in the “Front”. Of 76 seals he observed being killed, he recorded at least six (7.9 percent) that had been clubbed with illegal weapons (in 5 cases with gaffs, and in one with a mallet).

Hughes (1977) observed seal hunting by landsmen in Newfoundland, and documented the use of illegal weapons:

“...fourteen speed boats came in that particular beach. Others undoubtedly returned to other haul out points. Each boat was crewed by two men. All boats carried one or more shotguns. Most carried two...I examined 41 seals of which 39 had been killed with shotguns. I talked to a number of the men. They made no bones about using shotguns. They admitted to it quite freely. Obviously the practice is commonplace and accepted. The beach around the landing site was littered with used shotgun shell cases...I think the simple explanation is that

shotguns have been used for many years. They are accepted as one way of killing seals...I was leaving the landing beach area when I met warden Waterman. I discussed my observations with him. He confirmed that shotguns are used. He intimated that he had not been instructed to take any action against the sealers for this breach of the regulations...senior Fishery officials must be perfectly well aware that the law is being ignored.” (3)

In the present-day seal hunt, the use of gaffs as killing implements continues unabated. Documents obtained through Access to Information laws in Canada include testimony from sealers who reported that they had used prohibited rifles to kill seals in 1998, and that fisheries officers may have been aware of the situation:

"The seals were always in a net bag in the speed boat, when they were hoist on board there were numerous 22 caliber rifle casings among the seals. They were often kicking around the deck of the longliner, I seen the observer Rex Hodder pick them up and throw them over aboard. He had to know that the 22 guns were being used. They even make a different sound to the heavier gun. There was an effort to hide these guns from Rex Hodder. They were passed down through the vents in the engine room. They were kept in cases while in the two speed boats. We landed something over three thousand seals from the trip. We got in somewhere around the 21st of April, 1998. I don't think that the 22 caliber rifle is powerful enough to kill even a beater seal. I often seen seals alive after we hoist the seals them out of the speed boats. We would finish them off with a hakapik."

"I probably killed three to four hundred seals with the 22 caliber rifle...There was conversations between the skipper and myself and the crew to make an effort to hide the 22 rifles from the observer." (Foley 1998)

In 2001, Burdon et al record numerous instances of seals being clubbed with gaffs both in their own observations from helicopter (through wescam lenses) and in footage of the 1998, 1999 and 2000 seal hunts documented by IFAW.

Both IFAW and HSUS have documented repeated instances of seal hunters killing seals with illegal weapons in recent years. In particular, HSUS documented numerous instances of sealers clubbing seals with gaffs at the 2007 commercial seal hunt. (HSUS 2007b)

6. Impaling live seals on gaffs and dragging them across ice floes

More than eighty years ago, England (1924) reported sealers hauling live seals in on gaffs. This behaviour is documented in numerous subsequent observations over the years (RowSELL 1977; RowSELL 1978) and has been repeatedly captured in video footage of the seal hunt filmed by both IFAW and HSUS in recent years.

In 2001, Burdon et al documented the use of illegal killing implements. Of the 180 incidents of killing observed in the IFAW tapes, 69 percent were impaled on a gaff

and dragged across the ice without the sealers checking to ensure the animals were dead. In many of these cases, IFAW had noted that the seals appeared to be alive as they were dragged across the ice. In their observations of the 2001 seal hunt through the wescam lens, Burdon et al also noted a number of instances of sealers failing to perform tests for unconsciousness and then impaling the seals on gaff hooks and dragging them across the ice floes.

Daoust et al (2002) also recorded instances of seals being hooked and then dragged with gaffs and hoisted aboard sealing vessels in footage provided by IFAW of the 2001 seal hunt.

In recent years, footage documented by IFAW and HSUS shows sealers routinely impaling seals on gaff hooks and dragging them across the ice floes, prior to testing the animals for unconsciousness. Notably, HSUS captured repeated instances of live seals being dragged across the ice and hoisted on board sealing vessels with gaffs at the 2007 commercial seal hunt. Of 71 random instances of seals being killed filmed, sealers failed to perform a test for unconsciousness prior to impaling seals on hooks and dragging them across the ice in 72 percent of cases. In 25 percent of these instances, the seals appeared to be responding to pain as they were hooked and dragged (HSUS 2007b).

7. Committing other acts of cruelty

Because the seal hunt is relatively unmonitored, sealers are aware that illegal behaviour is unlikely to be observed. It is perhaps unsurprising that acts of cruelty that go beyond the industry-wide behaviours documented above are recorded.

For example, Terhune (1974) observed the seal hunt in the Gulf of St. Lawrence and stated, "Fisheries officers reported that they had found an adult that had been wounded (and presumably blinded) but not killed. A short distance away they found a pup that had been killed but not skinned" (1-2).

Documents obtained through Access to Information laws include nearly 20 pages of testimony from sealers regarding an incident involving six sealing vessels in 1998. The crews of these vessels had illegally and deliberately killed pregnant hooded seals in a whelping patch. The sealers reported that they had brought the (potentially) dead females on board for skinning, cut them open, and removed the living fetuses from their bodies. Sealers testified that they had thrown the living fetuses into the ocean and watched as they tried to climb onto the ice floes:

"I did see some mother seals killed and the pup fall out on deck still alive. (Deleted) told me to throw it overboard and I did. It crawled up on a pan of ice. The mother was full of milk, the milk ran out on deck when the pup fell out."

"I was present when female Hood seals were pelted and did see pups fall out of the female on deck. I seen this happen twice and know that it happened eight to ten times during the first trip. I knew this happened because of conversations with

the crew. The two pups that I saw on deck were alive. The pups were threw over board and on one occasion I did see one of these pups swimming in the water. I don't know what happened to the pups."

"My job was pelting seals and using the gun. I was present when the female Hood was being pelted and young pup fell out of her onto the deck, This happened eight or ten times. There were lots of comments made for example, 'If we only had a video camera we would make a fortune' and 'We should never be allowed out killing them.'"

"After the females were pelted and pups fell out onto the deck the pups were thrown over the side. I did see a couple move around in the water behind the boat. They appeared to be alive and swimming. We watched a seal that came out of the old one on deck try to get up on a pan of ice. It did not get up to my knowledge. This did bother me to see seals flapping around in the water and trying to get up on the ice."

Obstacles to Humane Killing

While methods of killing could be suggested for the commercial seal hunt that would fit within accepted definitions of humane slaughter, there are a number of obstacles that would prevent these methods from being effectively or consistently applied. These include:

1. Physical Environment of Canada's commercial seal hunt

The killing environment in a slaughterhouse can be controlled in theory. The animal to be euthanized can be immobilized, killing implements can be regulated and inspected, supervisors can be on hand to supervise the killing, and inspectors can observe the killing at any time.

This is not the case in a wilderness environment, and conditions found in the field are more challenging than those that are controlled (AVMA 2007). Hunters targeting wild terrestrial animals must deal with challenges to delivering a humane slaughter, such as free ranging targets and the distance at which they often have to make the kill. For seal hunters, all of these factors apply, along with three notable additions:

- Sealers work on moving, unstable platforms
- Sealers work in extreme ocean/weather conditions
- Wounded seals are able to dive beneath the surface of the water to escape

Canada's commercial seal hunt occurs in the spring, up to 170 miles off of Canada's east coast in the northwest Atlantic Ocean. In this ocean environment, high ocean swells, gale force winds, dense fog and driving sleet and rain are all common elements. More than 1000 vessels operated by thousands of sealers participate in the commercial seal hunt each year (DFO 2007). Sealers either club seals on the ice floes or shoot at seals with rifles from moving vessels (Daoust et al 2002). In both of these situations, the ice conditions and extreme weather that make up the physical environment in which the seal hunt operates affect sealers' ability to deliver a humane death to the animals.

Unstable and broken sea ice

While the seal hunt of decades ago took place on solid sea ice, the environment has changed in the past decade. The present day seal hunt targets pups slightly older, and begins weeks later in the spring than it did in the 1980s. Moreover, in recent years, global warming has caused the ice floes off Canada's east coast to diminish dramatically (Friedlaender et al 2006). According to Environment Canada, 2007 saw a record low ice cover in the waters off the east coast of Canada.

As a result, sealers work on increasingly broken and unstable ice floes, hopping from pan to pan over stretches of open water. In theory, this creates a barrier to humane killing in three ways:

(1) Sealers are unlikely to be able to implement the four step humane killing process. Accurate and effective clubbing of seals while sealers scramble across broken, unsteady and slippery ice floes and attempt to maintain their balance without falling into the ocean would be an enormous challenge. Effective application of a blink reflex test in these conditions would be similarly difficult. According to the IVWG (2005), “the process for checking the corneal reflex is not simple, and can be very difficult to perform by a sealer on the ice” (16). The process of exsanguination is just as if not more challenging in the conditions under which the seal hunt operates. Tellingly, members of the IVWG argued that bleeding should not be mandated under the Regulations because “worker safety and the difficulties presented by the natural environment in which the hunt takes place were considerations that could make such a regulation difficult to apply, specifically in relation to hooking a seal” (10). One can deduce that the fourth step of humane killing—remaining with the animal through exsanguination to watch for signs of the seal regaining consciousness—would be virtually impossible for sealers to accomplish in the physical conditions of the commercial seal hunt.

(2) Sealers are increasingly resorting to shooting at seals from moving boats because the ice floes are not solid enough to walk on. (Daoust et al 2002) The IVWG estimates the average distance for sealers shooting at seals from their vessels to be 50-60 meters, and video evidence indicates even greater ranges. Accurate shooting from these distances is a challenge at best, given the seals are moving, the boats are moving, and the ice is moving. Moreover, seal processing plants deduct an amount from the value of the sealskin for every bullet hole found, so sealers have a financial incentive not to shoot at a seal more than once. Video evidence of the commercial seal hunt in recent years consistently shows seals shot and left to suffer for extended periods of time while boats maneuver into position to retrieve the seal. Worse, sealers are often unable to disembark onto the ice floes to retrieve wounded seals. They are therefore physically unable to perform a skull palpation or blink reflex test. In these cases, seals are stabbed with a metal boat hook, dragged across the ice floe, and hoisted aboard the sealing boat – often while still conscious.

(3) By the beater stage, some pups are able to swim proficiently. Moreover, harp seals that are born in bad ice years become adept at swimming earlier than normal, making them far more likely to dive into the water when clubbed or shot. When they are shot at on or near open water, seals will sometimes slip into the water and dive beneath the surface. These animals are rarely recovered, and would likely die slowly (“struck and lost”) (Fink 2007). The Canadian government estimates tens of thousands of seals that are shot at in or near open water die in this manner every year (Fink 2006). Notably, the IVWG recommends that “seals should not be shot in water, or in any circumstance when it is possible the carcass cannot be recovered” (2).



Carcasses left behind in 2005. The small and unstable ice pans are broken up and “rafted” on top of each other. These unsteady platforms provide little foundation for sealers to take the time to accurately stun, bleed and skin the animals.



In 2006, sealers worked on fragile, small pans of ice.



Abandoned seal carcass in 2006

Extreme weather conditions

Yet another obstacle to humane killing at the Canadian seal hunt is the unpredictable and often extreme weather conditions that are a constant factor in the northwest Atlantic. Reports by the Canadian government and marine safety organizations, along with observer reports, confirm that seal hunters work in adverse weather conditions as a matter of course.

According to a 2000 report by Maritime Search and Rescue, “Operating under any circumstances in the marine environment of Newfoundland and Labrador brings with it a higher than normal range of risks. Exposure to meteorological elements is perhaps most critical” (3). The report noted that “operating in adverse weather conditions...is often the norm” (11), and claimed that fishermen were found to risk fishing in foul weather during short fishing seasons. The report went on to say that studies have shown that fishermen tend to take risks for economic gains and in doing so, push weather limits.

In a 2004 presentation, the Canadian Coast Guard cited “harsh environmental factors” and “a willingness by fisherpersons to take risks” (5) as contributing factors in the high number of search and rescue incidents in the fishery. The report stated the “seal fishery” accounted for 24 percent of all search and rescue incidents in the fishing industry (15).

Humane society representatives in recent years have testified that they have observed sealers working in dense fog, driving rain and sleet, and in 2007, seal hunters were observed killing seals in 15 foot ocean swells.

Dense fog, freezing rain, high winds and ocean swells can all compromise the ability of any sealer to deliver a humane death to seals, creating obstacles to accuracy in both clubbing and shooting and ability of sealers to retrieve wounded animals.

Not surprisingly, the Canadian government estimates that tens of thousands of animals are “struck and lost” each year in the commercial seal hunt. These are wounded animals that escape beneath the surface of the water, where they often die slowly but are not recovered.

In November 2006, the North Atlantic Marine Mammal Commission held a workshop to discuss the problems of “struck and lost” in seal, walrus and whale hunting. In the report resulting from the workshop, the seals working group emphasized that “it was recognized that some struck and loss was likely inevitable, given the conditions of hunting” (48). One participant stated, “Weather conditions are a very important factor in affecting struck and lost...Wind is no good for hunting, and calm water is best” (59).

According to Burdon et al (2002):

“Shots should only be fired by a certified marksman using legally required ammunition and weapons, to seals on the ice, from a distance and under conditions, which will enable an accurate head shot to be taken, whereby the projectile will enter the brain causing sufficient damage to render the animal either unconscious or dead” (12).

Ballistics reports list a number of factors that decrease accuracy in shooting, and wind speed is one of those emphasized. Lonsdale (1995) states:

“There are several environment/weather factors that can have effect on a bullet in flight. Although temperature, humidity, altitude and mirage can all have significant effect at longer ranges, wind can be a problem at even medium to close ranges. Wind...along with other weather factors is probably responsible for more missed shots than any other single factor.” (167)

Eye-witness reports and video evidence suggest that sealers often work in high wind conditions, which are standard in the marine environment. For example, on the opening day of the 2005 commercial seal hunt, Environment Canada warned of gale force winds in the Gulf of St. Lawrence, reaching 60 miles per hour. Observers videotaped sealers killing animals in driving winds and rain.

It is difficult to imagine that sealers would be able to make a clean shot from distances of 50 to 60 meters (IVWG 2005), or more (as documented in IFAW and HSUS footage), when shooting from moving vessels in high winds, aiming at moving seals on moving ice floes on ocean swells. As Dr. Charles Caraguel, a member of the IVWG, testified before the House of Commons in October 2006, “I went to the front in 2006 where they used the rifle, and I saw dirty stuff.”

According to the IVWG,

“...the gunner must be a competent and disciplined professional who is capable of placing a bullet accurately under difficult conditions. It is important that the gunner has the discipline to know when not to shoot, either because of lack of ability to ensure an accurate shot and risk leaving the seal in a conscious state, or because of the potential for not being able to retrieve the seal.” (9)

Given the physical conditions in which the seal hunt operates, it would be reasonable to suggest the four step process I have proposed for humane killing would be virtually impossible in many cases. The IVWG (2005) admits that “Because of ice, sea and weather conditions there are greater challenges for hunters to carry out all three steps of stunning, checking by palpation of the skull, and bleeding” (8-9). The IVWG (2005) also noted that, “the Group does not feel that the absence of corneal reflex can be checked with sufficient care and skill to make it an effective means of determining successful stunning” (21).

Clearly, the environment of the northwest Atlantic is one in which difficult working conditions and associated risk taking is a constant. Fishermen working in Newfoundland waters are accustomed to killing animals in adverse weather conditions for economic gain, particularly in short fishing seasons such as that of the commercial seal hunt. As much as these factors pose a risk to human safety, they also create serious obstacles to the ability of the fishermen to ensure a humane death to the seals.

As was noted in 1985 by Walsh in his submission to the Royal Commission on Seals and Sealing, “The harsh environmental conditions where the sealing operations take

place both in the “Gulf” and in the “front” reduce the likelihood that the killing of seals could ever be conducted in a humane manner” (8).



Conditions at the 2006 seal hunt – broken ice and severe fog. Crew members on the sealing vessel pictured in this photo were actively hunting and killing seals at the time the image was captured.



In 2005, observers filmed sealers operating in small boats amongst small ice pans. Wounded seals were able to escape beneath the water's surface.

2. Speed at which the seal hunt must be conducted

The sealing season spans six months (November 15 to May 15), and in recent years the Minister of Fisheries and Oceans has chosen to extend the sealing season up until the end of June. In 2007, for example, the commercial seal hunt was only closed on June 23rd.

However, the bulk of the killing in the commercial seal hunt occurs over just a few days in late March (in the Gulf of St. Lawrence) and in mid April (in the front). In some years, more than 145,000 seals have been killed in less than two days in the front. In 2005, fully 78 percent of the harp seals killed in the commercial seal hunt were slaughtered in just six days between the two regions (HSUS 2007a).

One of the primary reasons for this intensive hunting is that Canadian sealers compete against each other for quotas. Each region is assigned a total quota, and the

vessels that participate in each area work to kill as many animals as quickly as possible, knowing that as soon as the quota is reached, the hunting will be closed down for that area.

IVWG (2005) recommends reworking the ways in which quotas are allocated to help reduce competition and therefore the speed at which the seal hunt is conducted. However, the following economic factors show why this is unlikely to work:

Risk of vessel damage

The fishing vessels that participate in the hunt are less than 65 feet in length. Maritime Search and Rescue (2000) reported that, “While insurance databases are well guarded under confidentiality protocols, it is evident that there are many fishermen who fail to carry insurance, particularly in vessels not exceeding fifteen GRT” (10). Insurance companies impose a large deductible on fishing vessels that operate in ice conditions. The Government of Newfoundland and Labrador issued a press release in 2002, noting, “for a vessel valued at \$500,000 or more, there is a \$150,000 deductible while fishing in ice and a \$250,000 deductible while engaged in the seal fishery. A normal deductible while not fishing in ice is \$5,000.”

Clearly, whether a fishing vessels is insured or not, participating in the seal hunt involves a tremendous financial risk. Logically, one can assume the captains of vessels participating in the seal hunt hope to spend as little time as possible there, given every minute is a potential financial disaster.

Operational costs

Fuel for the vessels is expensive, and the more time spent at the seal hunt, the higher the cost. Moreover, the longer a vessel and crew remain at the seal hunt, the greater the costs for food and other maintenance items.

Other fishing seasons

Government data shows almost all fishing vessels that participate in the commercial seal hunt are licensed for other fisheries (DFO 2006). Soon after the commercial seal hunt begins, a number of other fisheries also open, including crab, shrimp and lobster—the three most lucrative fisheries on Canada’s east coast. Notably, these are also the top three fisheries that sealing vessels are also licensed to participate in. Logic dictates that the fishing vessel captains and their crews would prefer to spend as little time as possible at the commercial seal hunt, to enable them to engage in these other fisheries.

3. Inability/unwillingness of authorities to enforce regulations

There are a number of factors that prevent adequate monitoring of the seal hunt and enforcement of regulations:

Inability to monitor the hunt

Canada's commercial seal hunt operates over more than 400,000 square miles of ocean in the northwest Atlantic. Between 5000 and 6000 individual seal hunters operate from more than 1000 sealing vessels less than 65 feet in length. The vessels spread out over thousands of miles of ocean, as far as 170 miles offshore. Video footage of the commercial seal hunt documented by IFAW and HSUS in recent years confirms individual seal hunters move far away from their vessels in all directions with the use of skiffs (small boats), skidoos, or on foot.

Prior to 1987, the seal hunt was largely conducted by factory ships upon which DFO officers could be stationed to observe the activities of the crew. But even then, observers did not believe the enforcement was adequate enough to ensure humane killing. Platt (1981) stated, "I never saw a Fisheries Officer on the ice actually checking the humane aspect of landmen's sealing" (95). Hughes (1971) stated enforcement efforts should be increased. Two veterinary observers (Simpson 1966, 1967a; Jordan 1978, 1985) went further, stating the hunt could not be patrolled effectively enough to make it acceptable.

In 1986, the Royal Commission on Seals and the Sealing Industry reported on the inability of fisheries officers to adequately monitor the seal hunt. They noted, "the area that they must patrol is very extensive, the number of sealers is large, and sealing operations are multifaceted. For these reasons it is impossible to keep all parts of the seal hunt under close supervision at all times" (8-9).

Today, government monitoring of the commercial seal hunt in terms of humane killing is conducted by fisheries officers stationed on coast guard vessels. While there are over 1000 sealing vessels that participate in the commercial seal hunt, only a couple of coast guard vessels are deployed to the region. The massive coast guard vessels are normally stationed miles away from the smaller sealing boats, and thus observation of hunting methods from this platform is not viable. Enforcement agents are able to leave the coast guard vessels by helicopter or small speed boat, but are rarely seen to do so by animal protection groups that document the seal hunt.

Regardless, the handful of enforcement people stationed on coast guard vessels would be unable to monitor the thousands of individuals hunting over hundreds of thousands of square miles of ocean this way. The scale of the hunt presents another challenge, with hundreds of thousands of seals slaughtered in just a few days. Not surprisingly, HSUS filmed consistent and serious violations of the Marine Mammal Regulations in 2007, with a Coast Guard vessel stationed nearby. To further complicate the situation, Coast Guard vessels are often called away from monitoring and enforcement of the hunt to perform other duties, such as icebreaking for other vessels (IVWG 2005).

The IVWG (2005) described the inability of enforcement officers to monitor the seal hunt:

“The Front currently accounts for two-thirds of the seals killed during the annual Canadian harp seal hunt. Because of its remoteness and difficult environmental conditions, it is generally considered not to be well observed or monitored...DFO appears to lack sufficient dedicated capacity to monitor and enforce regulation of the hunt, especially at the Front.” (12, 14)

As noted by Platt (1981), “Sealing Regulations, however comprehensive and skillfully drafted, become ineffective unless properly enforced” (7). Veterinary evidence and extensive video footage of the seal hunt documented by IFAW and HSUS suggest that sealing regulations do little to influence sealers’ actions at the hunt, and possibly serve as more of a public relations tool for the Canadian government in its defense of the industry.

Inability/unwillingness to enforce regulations

Fisheries officers are often residents in small communities that have social and economic links to the seal hunt (IVWG 2005). One can imagine the difficulty that would be faced by such an officer in charging a member of their own small community for sealing regulation violations. The Group recommends, “DFO should consider bringing in officers from outside communities who are not faced with monitoring and potentially laying charges against friends and neighbours” (14). While in theory this may sound logical, the practical realities and expense of relocating fisheries officers to remote locations during the months the seal hunt operates removes this as a viable solution.

There is also a clear conflict of interest in DFO being both an advocate for the seal hunt and its regulator (IVWG 2005). Given fisheries officers are employed by the Department of Fisheries and Oceans, they work in an environment that may not encourage rigorous application of the law in this matter. Moreover, the highest authority within the Department of Fisheries and Oceans is an elected official normally residing in a province engaged in seal hunting. His advisory group, the Standing Committee on Fisheries and Oceans, is comprised of other elected officials, also largely from provinces that participate in the seal hunt.

As noted by Linzey (2006) in *An Ethical Critique of the Canadian Seal Hunt and an Examination of the Case for Import Controls on Seal Products*, animal protection groups have submitted video evidence of nearly 700 apparent violations of the Marine Mammal Regulations to the Department of Fisheries and Oceans. Yet despite the presentation of this evidence, the DFO failed to lay a single charge against the individuals involved. While the DFO claims to have laid many charges against sealers in recent years based on other evidence, a review shows that they are most often for violations that do not pertain to humane killing.

A Comparison of Recommendations

Well intentioned veterinarians and humane society representatives who have studied the seal hunt over the years—facilitated by both government and NGOs—have provided numerous suggestions on ways to improve the killing methods employed in the Canadian seal hunt.

Over the years, the Canadian government has made some token attempts to address these recommendations, through sporadic changes to the regulations that govern the commercial seal hunt.

In 2005, the IVWG made a number of recommendations in their report *Improving Humane Practice in the Canadian Harp Seal Hunt*. These recommendations have been used by the Canadian government to convince the public that work is occurring to improve the humane aspects of the seal hunt (DFO 2007).

While many of these IVWG recommendations have clearly been carefully considered and are entirely reasonable in theory, it is important to note that similar recommendations have been made for over four decades. However, despite the recommendations and the changes that have occurred on paper, there is consistent evidence that sealers fail to observe regulations, and that cruelty at the hunt is in fact escalating. This suggests working to improve humane practices in the seal hunt on paper has very little practical impact on the actual hunting of seals.

Following are some of the recommendations put forward by the IVWG, and comparable recommendations from years past:

“A three-step process of stunning, checking (palpation of the skull) and bleeding should be followed, and should be carried out in sequence as rapidly as possible.” (IVWG 2005, 2)

“We recommend a process of rapid stunning (resulting in a rapid loss of consciousness), followed immediately by a bilateral corneal reflex check to assess loss of consciousness, followed immediately by bleeding out to ensure death occurs, are followed in order to reduce these levels of suffering.” (Burdon et al 2001, 1)

“It must be clear that once a seal has been struck, sealers must promptly confirm the animal’s death by administering the blinking eye reflex test before skinning or bleeding or otherwise cutting open the seal. It goes without saying that by ensuring that the seal is dead before moving to skin or bleed the animal, suffering will be limited... a Regulation that all seals must be bled and skinned immediately must be introduced. In essence, no one should be able to strike or shoot a second seal until the first seal has been killed, and immediately bled and skinned.” (IFAW 1998, 9-10)

“Exsanguination in the manner prescribed by the sealing regulations must be carried out as soon as the animal is clubbed. Exsanguination must be done by severing the axillary blood vessels completely.” (Taylor 1979, 5)

“They should strike seals with a hakapik before bringing them into their boats when there is evidence the seal might be conscious. Such consciousness may be manifested by blinking” (COSS 1977, 1).

“Those doing the killing must be able to assess when the animal is insensitive to pain and thus unconscious. Therefore, at the time of receipt of his license, the sealer should be given written instructions on how to assess unconsciousness of the animal, ie a glassy-eyed and staring, appearance with no blinking reflex.” (Rowse 1977, 3)

“All novice sealers should be given mandatory courses of instruction on humane killing of seals, before a license is issued. This should include: (1) the proper use of a hakapik or bat, (2) the ability to assess unconsciousness, (3) the proper methods of skinning and (4) a test of marksmanship made from the ship-based operation in which the sealer will be operating. Upon completion of instruction the competence of these apprentice sealers should be examined.” (Rowse 1977, 3)

“Clubs should be used in such a manor as to cause immediate death by a blow on the skull, therefore causing a fractured skull and destroying the brain.” (Walsh, 1966, 1)

“Seals should not be shot in the water due to the high potential for “struck and lost” events, suffering resulting from the inability to confirm irreversible unconsciousness, and potential for the loss of wounded animals...A seal should not be shot in the water, or in any circumstance when it is possible the carcass cannot be recovered.” (IVWG 2005, 22, 2)

“Any method for killing a seal which does not allow for the above process of stunning, checking and bleeding to be performed, has an enormous potential to create suffering and is therefore unacceptable. As this process cannot be consistently followed in open water, we consider that shooting seals in open water can never be humane. Any method of taking a seal which requires the seal to be recovered by gaffing or hooking before the process can be followed, can never be humane” (Burdon et al 2001, page 1).

“The shooting of seals in the water or on broken ice must be prohibited in order to limit suffering and avoid large numbers of animals being wounded, but never recovered. This may also minimize the use of gaffs for retrieving seals from the water... No one should be permitted to shoot a seal from a distance at which either an instant kill, or the immediate recovery of the animal is unlikely.” (IFAW 1998, 10-11)

“No hooded seals should be shot in the water.” (COSS 1975, 2)

“The Department of Fisheries and Oceans Canada (DFO) should take steps to improve supervision, monitoring and enforcement, including the training of officers.” (IVWG 2005, 3)

“...the existing regulations are neither respected nor enforced. There is therefore an obvious need to improve this situation” (Burdon et al 2001, 12).

“Ways and means of enforcing the Regulations, when masses of longliners appear in the hunt as they did this year, require immediate attention to ensure the problems faced in 1981 do not become a regular occurrence” (RowSELL 1981, 11).

“Fisheries Conservation Protection Officers should increase their efforts to ensure their presence on the ice during sealing operations, and that this presence is made known to the sealer.” (RowSELL 1979, 4)

“Courses in humane killing, including the use of rifles, nature of ammunition, marksmanship, and all such related subjects should be given to Fisheries Conservation and Protection Officers. Such courses may be subject to support from the Federal Government using the resources of the College of Fisheries, St. John’s Nfld. Following this training, Officers should then develop and operate instructional programs in their local areas” (RowSELL 1977, 3).

“Individuals should receive training before they are licensed as hunters, and periodic upgrading should be required.” (IVWG 2005, 3)

“We agree with this proposal [to make a training program a prerequisite for all sealing licences and encourage the professionalization of commercial sealers] and would recommend that such a training program should provide a comprehensive understanding of the entire seal hunt process, giving the licensee a functional understanding of the recommendations that we have laid down and therefore a knowledge of how to comply with the regulations. The training program should include a test of competence, which must be completed successfully prior to issue of a licence. The licensing process should include reassessment on a regular basis. The current two year “probationary” period could be incorporated into such a training program. We recommend that the training program should incorporate a regular marksmanship test for firearms licence holders, which would include a proficiency test and would therefore be in addition to existing firearms training / licensing” (Burdon et al 2001, 10).

“IFAW supports any programme designed to eliminate cruelty and waste and to ensure that sealers are aware of the behaviour that is required of them by law. Such a training programme should include a requirement that sealers pass a marksmanship test every two years” (IFAW 1998, 6).

“Additional effort must be made in ensuring humane killing training programs are enriched and expanded. A system of educational programs for sealers must be a prerequisite with suitable practical tests prior to licencing.” (Rowse 1981, 11).

“Educational programs for sealers and those related to the sealing operations should be continued and expanded in order that greater knowledge of the biology and behaviour of the seal, as well as humane stewardship, be acquired by those involved in the seal fishery.” (Rowse 1980, iii)

“The training programs, which this year were conducted by the Fisheries Conservation and Protection Officers, for those responsible for the landmen and the large vessel operations, should be continued and expanded. Such action would ensure emphasis on humane killing and man’s responsibilities to ensure humane treatment and use of animal resource.s” (Rowse 1980, iii)

“All sealers on receipt of a license should be given written instructions on how to assess whether or not an animal is unconscious and insensitive to pain” (COSS 1977, 2).

“All new sealers should be given courses of instruction on humane killing of seals, such courses should be mandatory before the license is issued and the competence of the apprentice sealer examined. This should include the proper use of a hakapik, the ability to assess unconsciousness, and the proper methods of skinning as well as a test for marksmanship. This latter test should be made from a ship based operation in which the sealer will be operating” (COSS 1977, 2).

Other notable recommendations made by other observers, but not by the IVWG include:

“We recommend that the hakapik of the Norwegian sealers, be the only instrument used by sealers.” (COSS 1974, 3)

“I recommend, therefore, that the use of clubs and other instruments of manual killing be abolished in all future killing of the young harp seals.” (Hughes 1983)

“Recommendations: (a) a complete ban on landmen’s sealing.” (Platt 1981, 8)

According to the IVWG (2005):

“Veterinarians can only advise. It is up to the sealers and the industry to develop and consistently implement humane practices that minimize animal suffering. It is up to DFO to ensure that the Marine Mammal Regulations (2003) contain appropriate requirements, effective monitoring takes place, and the regulations are enforced.” (23)

Recommendations designed to improve humane practices at the seal hunt have been made repeatedly by observers for over four decades, and many of these recommendations have at various times become regulation. Despite this, inhumane killing continues unabated at the commercial seal hunt, and veterinary and video evidence confirm the cruelty is actually escalating.

This suggests that what is written on paper has little practical application in the field environment of the commercial seal hunt, and little impact on the behaviour of seal hunters.

Conclusions

Over the years, the Canadian seal hunt has been the subject of close scrutiny by government appointed and independent observers. Though some of the resulting reports have been interpreted by the Canadian government as evidence of humane killing at the seal hunt, a closer examination shows that each of them has recorded consistent, unacceptable and escalating levels of suffering.

The focus and operation of the commercial seal hunt have changed over the years, but there are persistent challenges to humane killing that have been well documented over the years, which should be considered in the context of the present-day hunt. These include inhumane killing by sealers and an inability/unwillingness of the Canadian government to enforce the regulations.

A killing technique that would fit within accepted guidelines on humane slaughter has been provided in this report. This would include:

- stunning the seal with one blow or shot to the head, without causing distress or pain to the seal
- immediately checking for unconsciousness through a corneal reflex test
- immediate exsanguination of the seal through cutting of axillary arteries, and
- the sealer remaining with the seal through the bleeding process to re-stun the animal if necessary.

However, the physical environment in which the seal hunt occurs and the speed at which it must be conducted prevents this humane killing technique from being employed effectively and consistently by sealers. Deteriorating ice conditions, extreme and unpredictable weather, high winds and ocean swells are all deterrents to humane killing and accuracy in clubbing and shooting, and in timely retrieval of animals in the case of shooting. In these conditions, shooting seals by rifle or shotgun from sealing vessels can never be considered to be acceptably humane. Even in the case of clubbing it is unlikely the four step killing process can consistently be effectively implemented. Veterinary studies conducted over the past half century confirm this is the case.

The large area of ocean over which the seal hunt occurs, coupled with the number of vessels and individuals licensed to participate, prevents the authorities from adequately monitoring the seal hunt. This, and the fact that authorities are under pressure not to enforce regulations, means there is no way to guarantee to the public that humane killing is employed at the seal hunt.

Similar recommendations on improving humane killing at the seal hunt have been made by humane society observers, scientists and veterinarians over the years. Some of these recommendations have become regulation at various times in history, and others have been included in instructional workshops and literature. Regardless, inhumane killing techniques and problematic behaviour including regulatory violations are routinely documented each year the seal hunt goes on.

More than half a century has gone by since the public first became aware of the unacceptable cruelty at Canada's commercial seal hunt. It is reasonable to think that five decades should have been more than enough time for the Canadian government to ensure the humane killing of seals at the commercial seal hunt, if it were possible.

Faced with its clear inability to improve the humane aspects of the seal hunt, the Canadian government appears to have shifted its focus to preventing observation and documentation of the killing. Over the years, extensive restrictions placed on observation by the Canadian government have made documentation of the commercial seal hunt a growing challenge. Tellingly, a 2007 report by the Standing Committee on Fisheries and Oceans recommended that the distance observers must maintain from seal hunters be increased up to 400 meters – the length of four football fields. From this distance, photographing or filming the commercial seal hunt would be next to impossible.

The majority of Canadians oppose the commercial seal hunt, and the evidence on inhumane killing at the seal hunt certainly supports their views. If Canada is to claim to be a humane nation, it must end the commercial seal hunt. In the meantime, the onus is upon nations that trade in seal products to discontinue that practice on behalf of the ethical standards of their own citizens. As AG Bourne stated so many years ago in his report on the seal hunt in 1966, "In the case of the seal hunt much of the cruelty is unnecessary, but the only way to prevent cruelty altogether is to abolish the industry, and this could only be attained if the demand for pelts and oil was to cease" (6).

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