



Module 28

Human Conflict and Animal Welfare

Lecture Notes

Slide 1:

This lecture was first developed for World Animal Protection by Dr David Main (University of Bristol) in 2003. It was revised by World Animal Protection scientific advisors in 2012 using updates provided by Dr Caroline Hewson.

Slide 2:

This module will introduce you to the ways in which collective human conflict affects animals. By human conflict, we mean fighting or war in a very broad sense, not domestic violence or aggression between private individuals.

We will start by clarifying terminology because there are different kinds of human conflict.

We will then focus on how animals may be affected by conflict. That is:

- the ways in which animals are affected when conflict occurs in the region where they live
- the ways in which animals are used actively in a conflict or the planning for conflict.

We will conclude with examples of how we can help to improve animal welfare in areas where there is conflict.

Slide 3:

Starting with terminology: the Department of Peace and Conflict Research at Uppsala University in Sweden provides the online *UCDP Conflict Encyclopedia*. The following definitions are taken from there.

Conflict has several characteristics, shown on the slide:

- there is disagreement between at least two parties
- the demands of each side cannot be met by the same resources at the same time. Typically, the resource is territory which contains a commodity needed for economic survival and growth, e.g. grazing for livestock; oil; minerals; water
- the parties use armed force to solve their disagreement
- this causes at least 25 battle-related human deaths in one year.

When all those conditions apply, there is a conflict. When the number of deaths in a year exceeds 1,000, the conflict is called a war.

Slide 4:

In the 21st century, the majority of conflicts in the world are occurring in Africa and South Asia and are taking place within countries' borders, rather than between countries.

- Conflict may involve the state itself (i.e. the official army and military police) or it may be non-state. That is, it may involve armed groups that are not part of the formal state apparatus.
- In both state and non-state conflict, there may be direct or indirect foreign support for any of the groups involved.

The slide shows examples of state conflicts.

- You can see that state conflict may be directed against other countries, as happened with the war between Iran and Iraq in the 1980s.
- State conflict may also be against the state's unarmed civilians (e.g. the Syrian conflict that began in 2011).
- State conflict may also be with organised armed groups within the state. These organised groups may be political (e.g. the conflict concerning the independence of Kashmir in India) or they may be criminal (e.g. the conflict between the state and drug cartels in Mexico). Note that political and criminal interests may overlap.

In 2010, there were 30 ongoing state conflicts around the world, i.e. resulting in at least 25 battle-related human deaths every year.

Slide 5:

Non-state conflicts are probably more common than state conflicts.

- Non-state conflicts occur between two or more organised armed groups, neither of which is the government.
- The groups may have varying degrees of organisation and be led by religious figures, warlords, etc. depending on their underlying ideology and origin.
- It is difficult to obtain current statistics on non-state conflicts around the world. However, Uppsala University's Uppsala Conflict Data Program (UCDP) indicates that between 1991 and 2009, there were 434, many of which are still active.

A final category of conflict is one-sided violence. This refers to violence against unarmed civilians; it may be committed by state or non-state groups, and results in at least 25 civilian deaths per year.

Research shows that the poorer the country, the more attacks there are on civilians by government and non-state forces alike.

Slide 6:

The main effects of conflict in any region are destruction, injury, disability and death, displacement and insecurity.

- **Destruction** means damage and breakdown of the social and economic infrastructure, and damage to the environment. The breakdown in social order permits corruption, and this makes it even harder for people to acquire the basic necessities of life.
- **Injury, disability and death** are the consequences of conflict that we automatically think of, and they can involve animals and humans.
- **Displacement** is another well-known consequence of conflict: people leave the area with their animals, either going to other countries as refugees, or moving elsewhere within their own country where they are known as internally displaced persons (IDPs). In both cases, people often live in camps.
- The fourth effect of human conflict is **insecurity**. This concerns the lack of predictability and availability of the normal features of peaceful life. Aspects of insecurity are physical and psychological, and include the risk of injury and death.

Slide 7:

We have looked at different types of conflict, and how they affect people in general.

Now we will look more closely at the effects of conflict on animals' welfare.

- First, we will see that domestic and wild animals alike may be caught up in the conflict around them and may suffer as casualties.
- Second, we will look at the ways in which animals may be enrolled to work in the conflict, and may come to harm because of it.

Slide 8:

We begin with animals living in areas where conflict is occurring.

Slide 9:

We have seen that most of the conflicts in the world occur in countries with the lowest incomes. Before we look at the effect of conflict on animals, we need to clarify this context of poverty.

In 2011, the Food and Agriculture Organisation of the United Nations reported that approximately 766 million rural livestock-keepers live on less than US \$2 per day. In many parts of Africa and South Asia, as well as parts of Central and South America, people living in towns and cities keep chickens, small ruminants and rabbits. Those people may also be poor.

Conflict in rural and urban areas alike can therefore affect large numbers of animals.

In these rural and urban communities, livestock and working animals have direct and indirect value:

- the animals provide food for their owners, as well as manure for use as fuel for cooking
- the animals also provide income through the sale of their products, and their use as draught power in agriculture
- they also have cultural value, e.g. as dowries.

In conclusion, the animals are central to people's health and the local economy.

Slide 10:

The consequences of conflict are a vicious circle.

First, there is reduced availability and access to food for people and animals. The resulting malnutrition reduces people's capacity to earn a living and provide the necessary extra care for their malnourished animals. The animals are unable to work well, and may die from parasitism and other diseases.

The problem of human and animal malnutrition is made worse in regions which are prone to natural hazards such as drought, heavy rains, etc. When landowners cannot carry out the normal management of their land due to conflict, hazards such as drought have an even greater impact on the ability to grow crops, and feed animals and people

A related problem is that conflict reduces people's ability to make money, meaning animals may die because their owners can no longer afford to buy food or veterinary services for them. This lack of money may cause farmers to overwork their animals. For example:

- In the study cited on the slide, it was more cost-effective for dairy farmers to maximise milk production by injecting the animals with oxytocin and bovine somatotropin, and milking them until they were cachexic (skeletal thin due to muscle loss). This lack of regard for the animals' welfare is thought to have come about because of corruption and bad decision-making by the state, whereby it was cheaper for farmers to 'use up' their cows, instead of moderating their milk production and re-breeding them. Instead, the farmers replaced their emaciated stock with cows who had been bought cheaply from destitute farmers elsewhere.

Slide 11:

A further problem created for animals by conflict is that the breakdown of normal security and infrastructure means that owners can no longer go out to harvest or buy food for them because of the lack of transport and the risk of violence.

- In many countries where there is conflict, veterinary services are provided by the state, and conflict results in the loss of normal veterinary infrastructure and services, so that sick animals cannot be treated.
- Also, disease control programmes stop, meaning diseases such as foot and mouth disease, which have severe effects on animals' wellbeing and productivity, may become epidemic. This creates animal suffering and also slows down the country's recovery when the conflict ends.

Slide 12:

During conflicts, large numbers of livestock may die. For example, during the Iraqi occupation of Kuwait between August 1990 and March 1991:

- the dairy population of 15,000 cows was reduced to 2,500
- the normal population of 800,000 sheep was reduced to 10,000
- of 8,000 camels, only 2,000 survived the conflict
- of 3,000 horses, fewer than 500 survived.

Note that, in peace-time, many of the animals would have been killed in routine, planned slaughter for meat consumption or through culling. However, with conflict, the concern is that animals may not be slaughtered humanely, and that they are killed in the course of more general violence and animosity.

Slide 13:

The Iraq–Kuwait conflict also affected many wild animals.

- During that conflict, a lot of crude oil was released into the Persian Gulf. This, together with toxic smoke from burning oil wells, is estimated to have killed ~30,000 marine and migrating birds, and threatened sea turtles and marine mammals.
- Also, many terrestrial animals are thought to have been killed because military vehicles ran over the animals and their burrows.

Slide 14:

A different example of how conflict can adversely affect animals' welfare comes from the Darfur region of Sudan. There has been state and non-state conflict there for many years. At one time, this created approximately 2 million internally displaced people in that region: that is, 2 million people had to leave their homes and live in camps.

Donkeys were and are very important for the livelihood of many of those people, particularly in the camps. Donkeys:

- are needed for the transport of humans, water and firewood
- can also be sold to provide cash.

However, in 2004, it is estimated that 75 per cent of donkeys in the camps died from the lack of food and water, and associated stress, probably including disease and parasitism. This meant that their owners could not easily collect firewood and water. Often, that is the job of women and children who were now at a higher risk of rape and attack.

This example illustrates how conflict can affect animal welfare and how this may then have a serious long-term effect on people.

Slide 15:

During times of conflict, working animals become more important. This is because the insecurity and loss of infrastructure limit the supply of fuel. Therefore people use animals for transport and draught power. In particular:

- refugees and internally displaced people may rely heavily on animals to transport them away from violence
- the combatants may recruit local equids to carry ammunition.

Module 18 on the welfare of working animals covers the welfare problems that these animals may suffer in peace-time. The problems commonly include malnutrition, pain caused by lameness – especially from foot lesions – and sores caused by ill-fitting harnesses. Lack of shade and the opportunity to drink may also be welfare problems.

Slide 16:

We noted earlier that in many countries affected by conflict there are urban livestock.

For example, the Republic of Congo (note: not the Democratic Republic of Congo, which is a different country) had a series of civil wars in the 1990s. During that time, the population of the capital city, Brazzaville, had to flee and leave all their animals behind. The army killed all those animals.

When the people were rebuilding their lives in peace-time, many could not afford to buy more stock. For those who could, it was expensive to keep the animals because feed mills in the country had been destroyed, so they had to import more expensive feed from neighbouring countries.

Slide 17:

Another effect of conflict on animals concerns captive animals. Whereas intensively farmed animals may be released to fend for themselves, most zoo species cannot be released because they are not adapted to the local environment, and because they may be a hazard to human beings.

For example:

- When Kuwait International Zoo was inspected after the Iraqi war in 1991, only 28 animals were found, out of an original 440.
- In Kabul Zoo in Afghanistan, by 2002, approximately 40 animals were left out of several hundred. The picture shows the only surviving lion. Most of the other animals were either injured or killed as an indirect result of human battles, and the resulting lack of infrastructure (e.g. running water).

Often aid is given as emergency food supplies, which is essential. However, less attention is usually paid to addressing long-term problems, such as the collapse of the agricultural system, soil erosion, the destruction of infrastructure such as veterinary hospitals, etc. Long-term veterinary plans are often not taken into account either.

All of these issues have just as severe an effect on people's lives, and greater attention needs to be paid to the effects of war on animals in their own right as well as to the impact of animal suffering and death on people in war situations.

Slide 18:

Meat from wild animals is known as bushmeat, and the killing of wild animals for meat happens during conflict for several reasons.

- First, other sources of meat and other food supplies have run out.
- Second, the greater availability of weapons and ammunition makes it easier to kill wild animals. The increase in arms may also increase unregulated killing of domesticated animals, and in all cases slaughter may be inhumane.
- An additional concern is that people may kill endangered species because the social and legislative infrastructures that protect these animals during peace-time may collapse. This is a particular concern with endangered primates.

This problem can continue when the conflict ends, because the country and its citizens still do not have adequate resources. For example, the United Nations Environment Programme (UNEP) is reported to have found this problem in Liberia:

- Liberia had two civil wars in recent years. The country remains very poor, e.g. at the beginning of 2012, the capital was reported not to have running water or mains electricity.
- Liberia's trade in bushmeat began during the years of war, and many farmers now rely on hunting as their main livelihood strategy. This is putting endangered species at risk. For

example, giant pangolins are reported to sell for about US \$1,000 each, and red colobus monkey for about US \$200. In addition, Liberia has six Atlantic species of sea turtles, and all are being poached.

Endangered species are also valuable on the international black market. This can be exploited in times of conflict, because of the ready availability of munitions. The next slide gives examples of this.

Slide 19:

Angola had a civil war for approximately 25 years. During this time, landmines killed and injured thousands of animals, including antelopes and elephant. The sale of the elephants' ivory helped to finance some factions in the war. In some cases, it is thought that poachers used landmines to kill or wound elephants in order to obtain ivory.

A further problem is that conflict may create a trade in small arms in countries that are not themselves at war, and this can in turn have a negative impact on animals there.

For example, in the 1980s and 1990s, people in the Central African Republic stopped hunting elephants with spears and began to use small arms, which had become readily available due to conflict in neighbouring Chad and Sudan. By the late 1990s, the elephant population in the Central African Republic had fallen by about 90 per cent from the levels known during the 1970s, and the rhinoceros population had completely disappeared. Most of those deaths are thought to have been due to slaughter using small arms.

Note that in some cases, conflict can lead to 'positive' outcomes for wildlife. That is, if an area becomes a 'no-man's land' where none of the warring parties dares to go, the area can become a haven for wildlife without human encroachment. However, any unexploded munitions there would be a hazard for the animals.

Slide 20:

Note that wild animals may also be affected by the preparations for human conflict. There is particular concern about this in the case of marine mammals.

Since the 1950s, there have been several reports of different species of whales becoming stranded in areas where naval military exercises have been taking place. Many of the animals have died, and have shown similar pathologies upon post-mortem examination.

- The pathologies have included lesions similar to those seen in people who come up from a deep dive too quickly (decompression sickness). There have also been pathologies found in those animals' acoustic systems.
- Possible mechanisms for the strandings include a behavioural response to sound emitted by naval vessels.
- It may be that the animals find the sound aversive because of its volume and frequency, and this causes them to surface too quickly.

Perhaps because of the secrecy surrounding naval activity, the possible effect on cetaceans is controversial.

For example, a paper published in 2010 showed evidence that review papers which were sponsored by conservation groups and the US Navy, respectively, were more likely to report primary research that supported the view of the sponsor concerned. This means the scope of the problem is still not entirely clear. However, Spain has banned naval exercises around the Canary Islands because of concerns for marine mammals there.

Slide 21:

You can see that conflict can affect domestic animals and wildlife in several ways. We shall now move on to look at how conflict can affect animals who are used as part of the conflict activities.

Slide 22:

Animals may be enrolled to work in the conflict or its aftermath. This slide shows the main areas of work. They are:

- transport of munitions and military personnel. Animals were widely used for this in earlier centuries, before mechanisation. It is probably relatively uncommon today, but still occurs to some extent when fuel supplies fail
- use of dogs for tracking, guarding, detecting explosives
- use of dogs and rats in de-mining land after the conflict
- use of marine mammals to detect mines or swimmers intruding into restricted areas.
- use of animals in research on injuries and weapons.

We mentioned the use of animals for transport of munitions and personnel earlier, and we shall move straight on to military working dogs.

Slide 23:

In state conflict, the state's forces (army and military police) may use dogs to track the enemy, to guard the bases, and to search for explosives or enemy combatants.

Military working dogs are generally very well cared for because their work is very important, and because they represent a considerable investment of money and time; for example, some armies may have breeding programmes that supply the dogs, and training the dogs may take months.

However, the following welfare concerns may arise:

- training – some training may be punishment-based which may be stressful, and cause fear and anxiety
- housing conditions – housing may not provide for basic animal needs when in a combat situation. For example, there may be extremes of heat or cold
- more generally – during training, and when not deployed in combat areas, military dogs are typically kept in kennels. Research on military dogs in the UK indicates that many of those dogs are very stressed by kennelling. Module 18 on working animals gives more detail about this, and some solutions
- disease and injury – dogs may contract life-threatening infectious diseases in the country or region where they have been stationed, e.g. leishmaniasis or Q fever. Dogs may also be injured in combat or in training, e.g. may suffer ruptured eardrums, wounds from bullets and explosions
- fear and anxiety – human conflict creates a noisy, unpredictable and uncontrollable environment. Depending on their temperament and experience, the dogs may find their work very stressful and may suffer from anxiety or other behavioural disorders. Little research has been reported on this however, one example comes from a US study of 268 military working dogs who were discharged from the army between 2000 and 2004. The survey suggested that German Shepherd dogs may be more likely than other breeds studied to develop behaviours that were undesirable in their work. For example, they seemed more likely to develop either too much aggression, or not enough aggression. Those behaviours may reflect negative emotional states such as ongoing fear or anxiety. However, the study was retrospective and the types of behavioural problems involved were unclear
- another potential welfare concern for military working dogs is if there is not a tailored system for re-homing the dogs after their working lives, as they may not adapt well to life as domestic pets.

Slide 24:

The international body that reports on landmines (the Landmine and Cluster Munition Monitor) stated recently that the unexploded remnants of war are present in more than 70 countries. Countries that well known to be affected include Afghanistan, Cambodia, Angola, Iran, Iraq and Colombia. However, note that the problem exists in countries on every continent.

In 2010, there were:

- 8 affected countries in Central and South America
- 11 affected countries in Europe
- 15 affected countries in the Asia Pacific region
- 22 countries in sub-Saharan Africa
- 14 countries in the Middle East and North Africa, and
- 10 countries in the area of the former Soviet Union.

There is general agreement that we do not know the full extent of the injuries caused by landmines. It was thought that 25,000 people and up to 600,000 animals are killed or injured by landmines each year. However, more recent figures suggest that the figure for human casualties may be much lower, although still very high: in 2010, there were 4,191 new casualties (deaths or injuries).

Dogs and rats are used in de-mining programmes around the world to detect unexploded landmines, so that trained engineers can then make them safe.

Slide 25:

- There are between 500 and 900 de-mining dogs working around the world. They cost approximately US \$10,000 to train to that level, and they work six or seven hours per day.
- African giant pouched rats are also used to detect mines. These rats cannot cover such a large area as dogs. However, their noses are naturally very close to the ground, which is where the odour of explosives is present in the highest concentration.

There is a relatively low risk of injury to dogs or rats who are used to clear mines, because their body weight and training make them unlikely to detonate the mines. Also, the animals are expensive to train, and do very valuable work therefore they are generally very well cared for, and given time to acclimatise to areas where they are brought to work, which may be very hot or humid.

However, in some areas without mine-clearing programmes, people may deliberately herd their cattle and goats onto mined areas as a way of detecting the mines, which causes death and injury to the animals and is obviously a welfare concern.

Slide 26:

Mines are also used in marine warfare.

The US Navy Marine Mammal Program trains bottlenose dolphins and Californian sea lions to detect and mark underwater mines and swimmers entering restricted waters.

The risk of injury to these animals appears to be low, and they are kept in accordance with national standards of care for all marine mammals. Thus, their use for military purposes does not appear to raise additional concerns.

The welfare issues related to the care of marine mammals are examined in Module 20, on animals used for entertainment.

Slide 27:

Countries may use animals in some or all the forms of military research listed on the slide. For example:

- goats and pigs are used to train physicians and paramedics in how to treat serious and traumatic injuries, including severe blood loss
- pigs are typically used in safety studies of new weapons to assess safety features and their effect on the target's body.

Some of the research may be secret for the purposes of national defence and security; therefore not all the research procedures used are clear. As with all research, the animal welfare aspects should be approved by an ethics committee or arbiter, to ensure animals do not suffer because of the research.

The use of animals for research related to conflict is controversial, because questions about the ethics of using animals in research are compounded by questions about the ethics of human conflict.

Slide 28:

We have now seen that animals may be affected by conflict in many different ways. We will conclude this lecture with examples of how we can help to improve animal welfare in areas where there is conflict.

Slide 29:

- A number of international organisations have programmes to rescue, feed, support and return animals displaced or threatened by war.
- The welfare impact of this work can be great if there is local political and social will. Some international animal welfare organisations form alliances with humanitarian or government agencies to coordinate relief efforts.
- These efforts could raise an ethical query – can the distribution of food to animals be justified in the short term when people are in need of food themselves? However, as noted in Module 29 on veterinary disaster management, often the people most affected by war are very poor and reliant on their livestock and working animals. So helping their animals benefits both animals and people.
- Afghanistan is an important example of this, as we see on the next slide.

Slide 30:

In Afghanistan, 80 per cent of the population work in agriculture and rely on horses, donkeys and camels for their livelihoods.

During five years of Taliban rule, the infrastructures that offered care for animals were decimated. Many animals died from infections and illnesses that could easily have been treated. In addition, the bombing of Kabul Zoo left many exotic animals wounded or dead. This caused immense animal suffering and placed additional strain on the already over-stretched veterinary clinics.

In Jalalabad, Afghanistan's second-largest city, there was also a lack of fresh water. The small volume available went to the people as priority, leaving little for the equine population, who suffered from dehydration, exhaustion and lameness. With little knowledge of equine care and with few vets available, owners did not know how to care for their animals and were forced to watch as their health deteriorated.

However, between 2003 and 2007 World Animal Protection worked with other animal charities to provide:

- mobile veterinary clinics
- harnesses
- training for farriers and community animal health workers.

As a result, more than 35,000 equines were de-wormed and almost 25,000 camels were treated. An estimated half a million people benefited from the project.

Slide 31:

World Animal Protection's work in Afghanistan also included relocating the few remaining animals from Kabul Zoo into enriched enclosures.

Note that you need to do a cost-benefit analysis before starting a rescue of small numbers of animals with special needs because it can be expensive, and the money might be better spent on helping a larger number of animals and people elsewhere.

Slide 32:

We looked earlier at an example of how human conflict creates many internally displaced people who may have to live in camps. The example concerned donkeys in camps in Darfur. To prevent more donkeys from dying there, a simple programme was set up in one of the camps. As you can see on the slide, the programme included:

- feeding and de-worming the animals
- buying hay when it was cheap
- treating the place where the hay was stored to prevent contamination by termites
- involving the community to simplify the distribution of food and worming treatment.

This intervention helped to reduce the adverse impact of the long-term conflict on the animals and the people.

Slide 33:

A longer-term solution to help protect animals during human conflict might be some sort of international convention.

The Geneva conventions aim to protect people from the worst excesses of human conflict. Animals do not have equivalent protection, and social expectations for animal care can also break down during war. Likewise, the Geneva conventions for people are often ignored.

Moreover, most of the conflicts of the 21st century are internal to countries and may not even involve government forces. Such combatants may be even less likely to abide by any conventions on animals. Thus, unfortunately, it seems very unlikely that international or national conventions and laws could offer much protection to animals as sentient beings at this time.

However, in the future, some international conventions may have the potential to influence animal treatment during war: for example, the 1976 Convention on the Prohibition of Military or Other Hostile Use of Environmental Modification Techniques states that "Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage", and it "prohibits the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment".

Potentially, animals could be included within the scope of this Convention. However, in the face of human suffering in conflicts, and given a general lack of animal protection in the national legislation of many countries, it does seem unlikely that much animal protection can be achieved under current international law.

Slide 34:

In London, there is a monument that pays tribute to the millions of animals who served, suffered and died in the human conflicts of the 20th century.

The picture shows part of the memorial: two mules are carrying part of a cannon and boxes of ammunition towards a gap in the wall. On the wall are carvings of dogs, elephants and other animals, and inscriptions such as "They had no choice". On the other side of the wall, there are sculptures of a horse and dog, free from war.

Other countries have also erected memorials to animals used in war – there is a memorial to war dogs in the USA.

We end this lecture by remembering that human conflict continues to affect many animals, directly and indirectly. The adverse effects of human conflict on animals are therefore a source of sadness and a strong additional argument against allowing our collective human disagreements to turn into conflict.

