



[www.animalwelfare.net.au](http://www.animalwelfare.net.au)

## AWSC Public Lecture

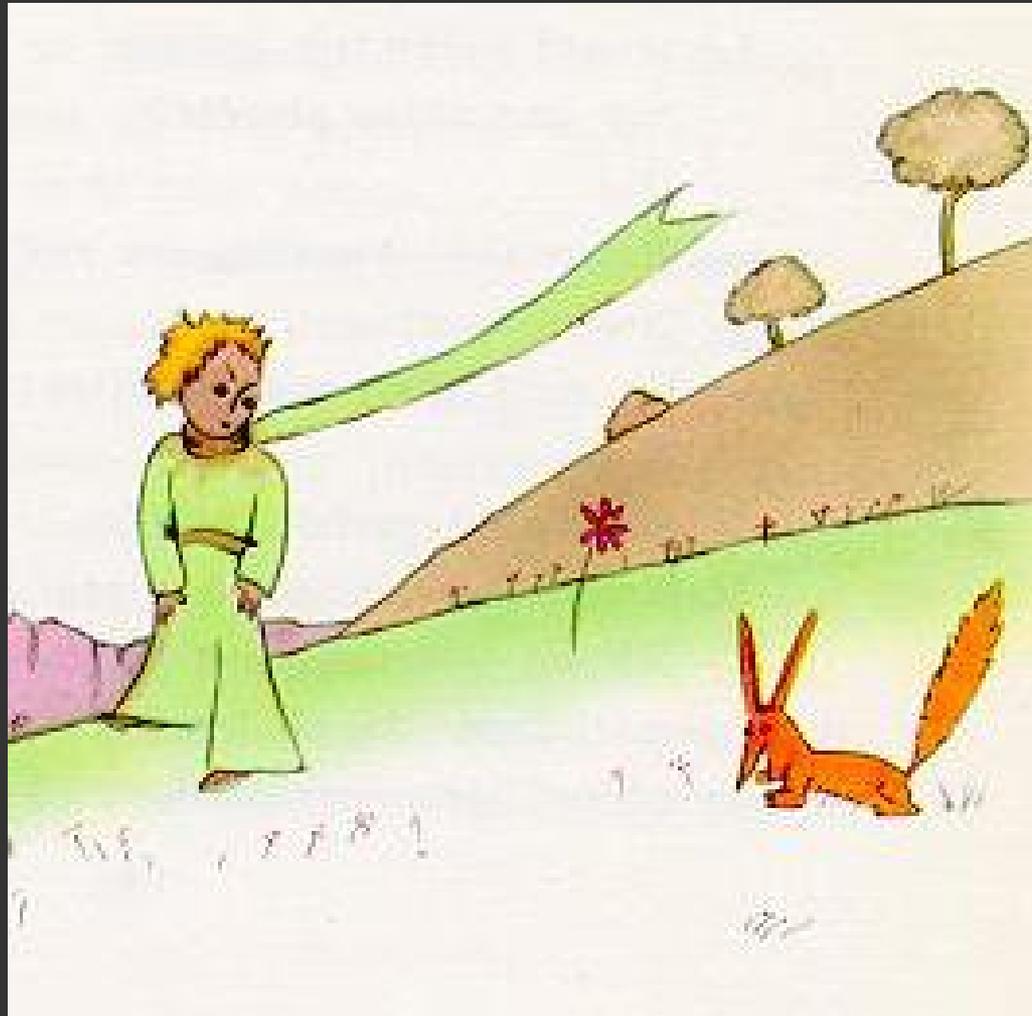
“The prince, the rose and the fox: an ethic for animals and nature”

**David Fraser**

Professor, Animal Welfare Program  
University of British Columbia

# The Prince, the Rose and the Fox: an ethic for animals and nature

David Fraser  
Animal Welfare Program  
University of British Columbia



Antoine de Saint-Exupéry, 1943. The Little Prince

“You become responsible, for ever,  
for what you have tamed”



Antoine de Saint-Exupéry, 1943. The Little Prince





How many birds?



How many birds?

1,560



How many birds?

11,560



How many birds?

21,560



How many birds?

31,560



How many birds?

41,560



How many birds?

51,560



How many birds?

61,560



How many birds?

71,560



How many birds?

81,560



How many birds?

91,560



How many birds?

101,560



How many birds?

111,560



How many birds?

121,560



Travis Longcore et al. (2012) An Estimate of Avian Mortality at Communication Towers in the United States and Canada. PLoS ONE 7(4): e34025. doi:10.1371/journal.pone.0034025



“6.8 million birds per year in the United States and Canada”

Travis Longcore et al. (2012) An Estimate of Avian Mortality at Communication Towers in the United States and Canada. PLoS ONE 7(4): e34025. doi:10.1371/journal.pone.0034025

# Exxon Valdez: 250 000 birds











Richard Forman, Lauren Alexander, 1998. Roads and their major ecological effects. *Annual Review of Ecology and Systematics* 29: 207-231.



- 1 million vertebrates/day
- “the leading direct human cause of vertebrate mortality on land”

Richard Forman, Lauren Alexander, 1998. Roads and their major ecological effects. *Annual Review of Ecology and Systematics* 29: 207-231.



Courtesy: Fatal Light Awareness Program



Daniel Klem 2009 *Proceedings Fourth International Partners in Flight Conference* (USDA, Forest Service Technical Report): 244–251



"Windows and other reflective and transparent surfaces likely kill a billion birds each year in the United States and billions worldwide."

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## Direct, unintended harms

- communication towers
- vehicle collisions
- windows

## Direct, unintended harms

- communication towers
- vehicle collisions
- windows
- fisheries by-catch
- ghost fishing
- pesticide drift
- oil spills
- cropping operations

- death

- suffering
- injury
- deprivation
- death
- decline of populations
- disruption of ecological systems
- extinction of species

- suffering
- injury
- deprivation
- death



Animal welfare

- decline of populations
- disruption of ecological systems
- extinction of species



Conservation

## Direct, unintended harms

- communication towers
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# Indirect harm caused by disturbing the processes of nature



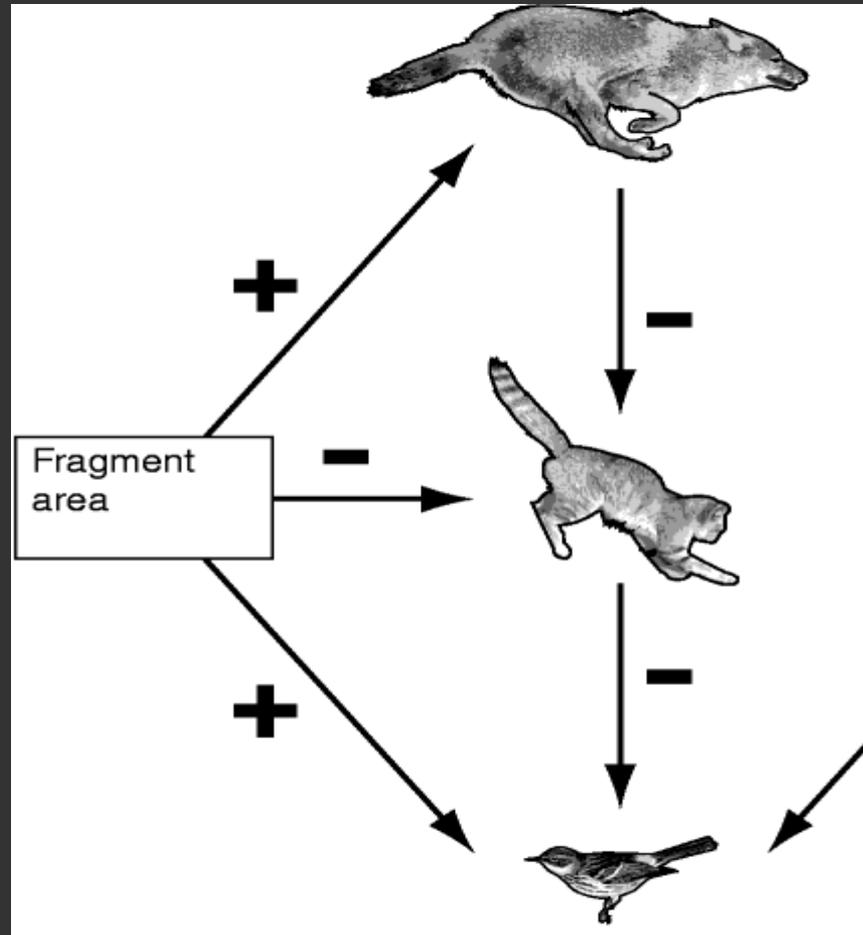
Photo: Karin Lau

# Large predators

	% range contraction
Grizzly bear	-53
Gray wolf	-42
Black bear	-39
Wolverine	-37
Cougar	-36

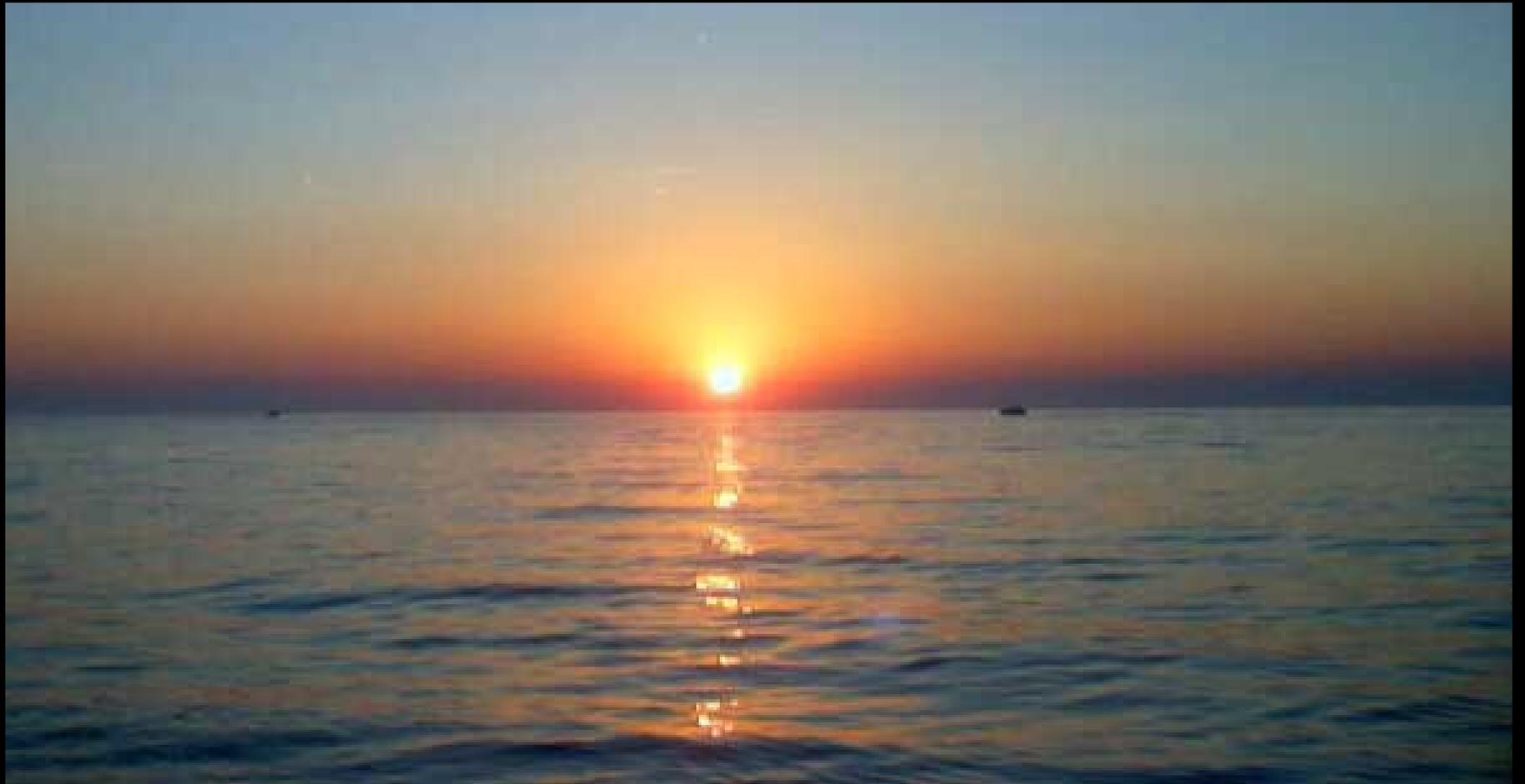
Laliberte and Ripple, 2004. *BioScience* 54: 123-158

# Mesopredator release



from: Kevin R. Crooks & Michael Soulé 1999. Mesopredator release and avifaunal extinctions in a fragmented system. *Nature* 400, 563-566.







“Lake Erie is in danger of dying by suffocation”  
Time Magazine, 1969







Photo: Conservation  
Law Foundation



“Dead zones have now been reported from more than 400 systems, affecting a total area of more than 245,000 square kilometers ... [and causing]... mass mortality and major changes in community structure”

Robert Diaz and Rutger Rosenberg 2008 Spreading dead zones and consequences for marine ecosystems. *Science* 321: 926-929



Courtesy: Kangaroorfarmer

“... free-ranging domestic cats kill 1.4 - 3.7 billion birds and 6.9 - 20.7 billion mammals annually” in the USA.



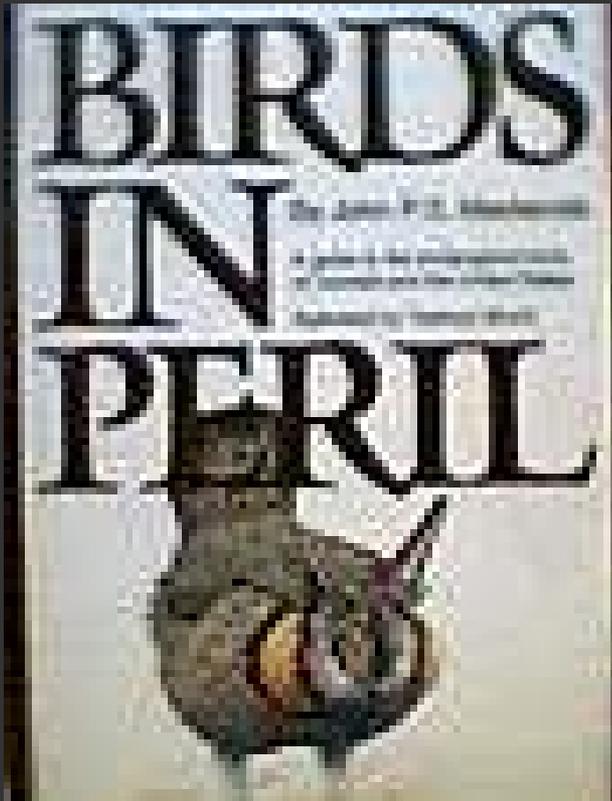
Loss SR, Will T, Marra PP, 2013. Nature Communications 4, Article 1396, doi:10.1038/ncomms2380

Harming animals by disturbing the processes and balances of nature:

- habitat alteration
- pollution
- introduction of invasive species

## Harming animals by disturbing the processes and balances of nature:

- habitat alteration
- pollution
- introduction of invasive species
- spread of animal diseases
- acid rain
- climate change



*Extinctions 1600-1977*

Hunting	13
Habitat destruction	14
Introduced species	<u>49</u>
Total	76





Chris D. Thomas et al. 2004. Extinction risk from climate change. *Nature* 427: 145-148



... we predict, on the basis of mid-range climate-warming scenarios for 2050, that 15–37% of species in our sample of regions and taxa will be 'committed to extinction'...

Chris D. Thomas et al. 2004. Extinction risk from climate change. *Nature* 427: 145-148

- suffering
- injury
- deprivation
- death



Animal welfare

- decline of populations
- disruption of ecological systems
- **extinction of species**



Conservation

The same human activities driving the current extinction crisis are also causing suffering, fear, physical injury, psychological trauma, and disease in wild animals.

Paul Paquet & Chris Darimont, 2010  
Animal Welfare 19: 177-190

<b>Conservation</b>	<b>Animal welfare</b>
<ul style="list-style-type: none"><li>• wild animals</li></ul>	<ul style="list-style-type: none"><li>• captive animals (domesticated)</li></ul>
<ul style="list-style-type: none"><li>• populations</li><li>• ecological systems</li><li>• species</li></ul>	<ul style="list-style-type: none"><li>• individuals</li></ul>
<ul style="list-style-type: none"><li>• biodiversity</li><li>• extinction</li><li>• ecological integrity</li></ul>	<ul style="list-style-type: none"><li>• animal health</li><li>• quality of life</li><li>• emotional states</li></ul>

Although disease and suffering in animals are unpleasant and, perhaps, regrettable, biologists recognize that conservation is engaged in the protection of the integrity and continuity of natural processes, not the welfare of individuals...

Conservation and animal welfare ... are conceptually distinct, and they should remain politically separate.

What is conservation biology?

Michael Soulé, 1985

[The view] that the individual may be sacrificed for the greater biotic good ... might be fairly dubbed "environmental fascism".

Tom Regan, 1983

*The Case for Animal Rights*

- suffering
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- deprivation
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Animal welfare

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- extinction of species



Conservation

Activity	Welfare-oriented	Conservation-oriented
Urban devel.		
Pollution		
Resource devel.		
Agriculture		
Poaching		
Pest control		
Pet trade		
Road/rail kill		
Window strike		
Sport hunting		
Cat predation		

Sara Dubois and David Fraser. 2013. *Anim. Welfare* 22: 49-55.

Activity	Welfare-oriented	Conservation-oriented
Urban devel.	6.8	6.5
Pollution	6.4	6.0
Resource devel.	6.1	5.8
Agriculture	5.9	5.6
Poaching	5.4	4.6
Pest control	4.9	4.0
Pet trade	4.9	3.9
Road/rail kill	4.8	4.4
Window strike	4.4	3.7
Sport hunting	4.6	3.3
Cat predation	3.9	3.6

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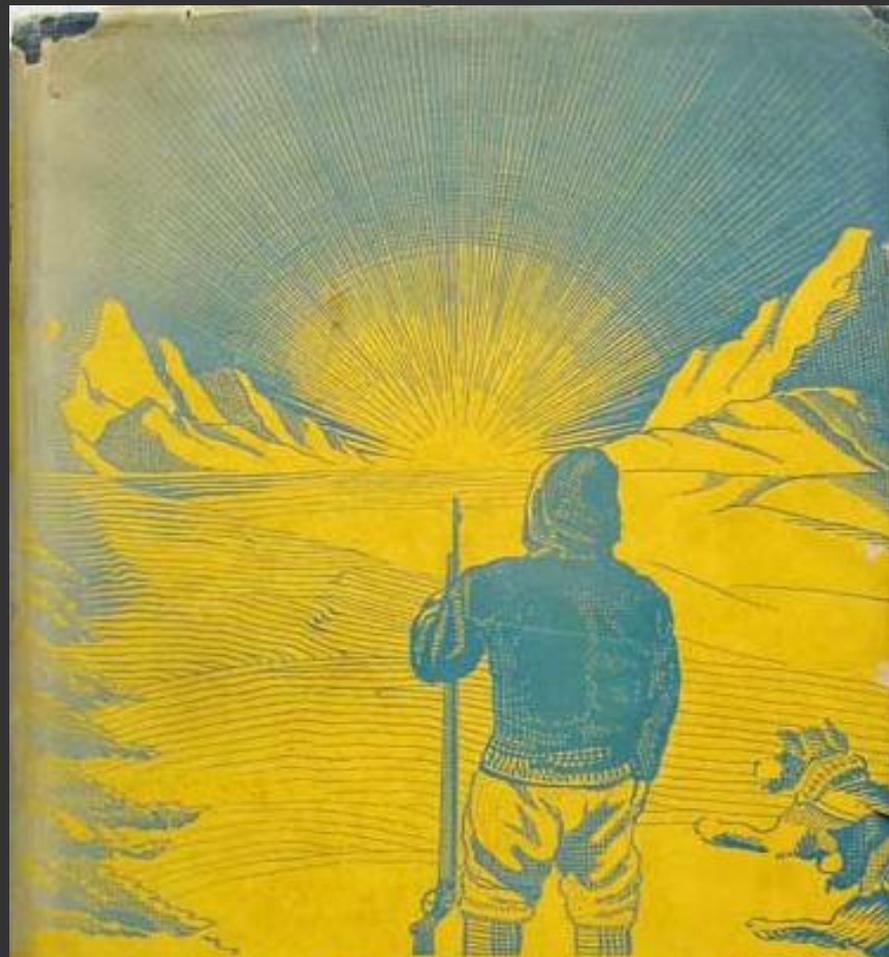


Animal welfare

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- extinction of species



Conservation



# NASKAPI

THE SAVAGE HUNTERS OF THE LABRADOR PENINSULA

FRANK G. SPECK



Speck, F.G. 1935. *Naskapi, the Savage Hunters of the Labrador Peninsula*.  
University of Oklahoma Press, Norman.





## "The Natural History of Morals"

William Lecky, 1869. History of European Morals from  
Augustus to Charlemagne.

Type of activity	Examples
Keeping animals	<ul style="list-style-type: none"><li>● farm</li><li>● laboratory</li><li>● companion</li></ul>

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# Principles of Biomedical Ethics

- beneficence
- nonmaleficence
- justice
- autonomy

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Five Freedoms

Three Rs

Ten Commandments

Noble Eightfold Path

# Principles of Biomedical Ethics

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Type of activity	Examples
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Type of activity	Examples	Level of control
Keeping animals	<ul style="list-style-type: none"><li>● farm</li><li>● working</li><li>● companion</li></ul>	High
Deliberate harm	<ul style="list-style-type: none"><li>● slaughter</li><li>● hunting</li><li>● fishing</li></ul>	High or some
Direct, unintended harm	<ul style="list-style-type: none"><li>● towers</li><li>● vehicles</li><li>● windows</li></ul>	Some
Indirect harm	<ul style="list-style-type: none"><li>● habitat change</li><li>● pollution</li><li>● invasive species</li></ul>	Little or none

Type of activity	Examples	Level of control	What can be achieved?
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Type of activity	Examples	Principle
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# Conclusions / Implications

# 1. Animal welfare

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## 2. Conservation / Animal Welfare

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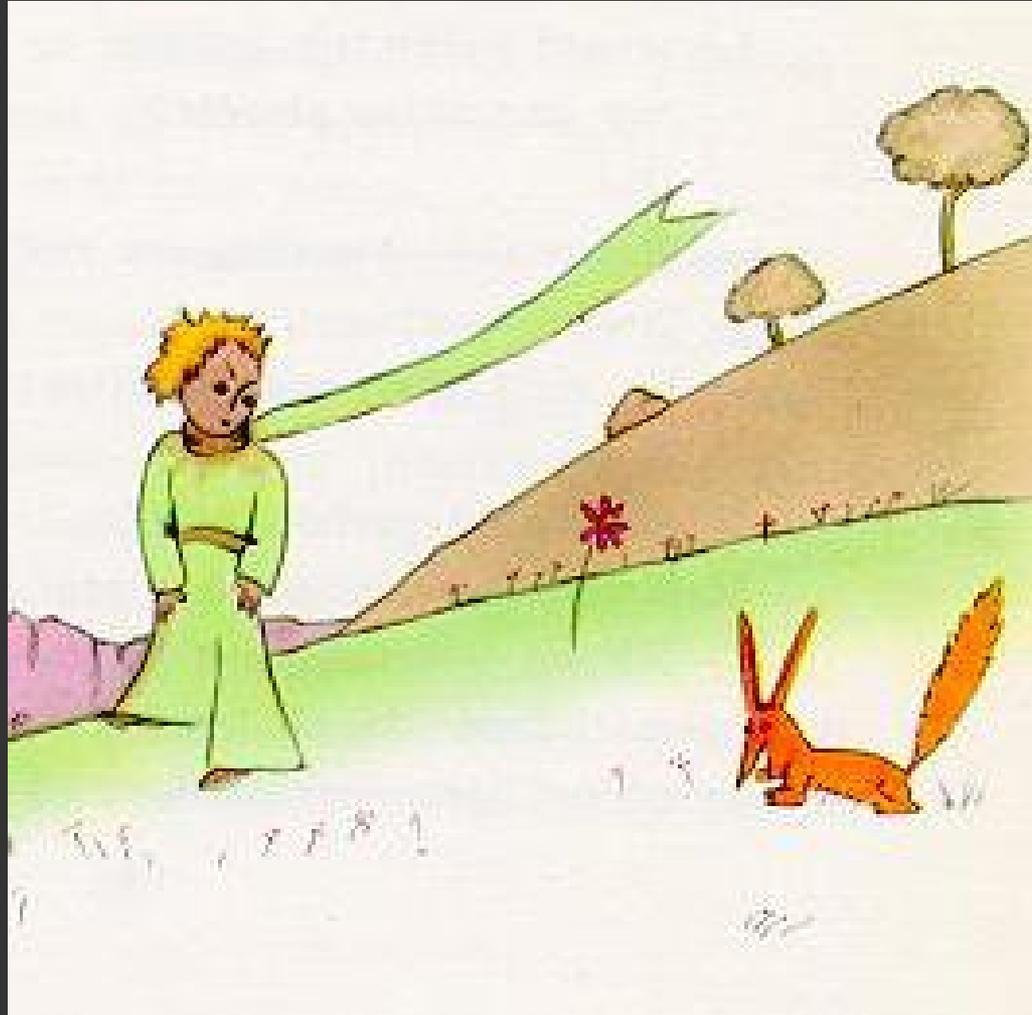
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# 3. Animal ethics

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“You become responsible, for ever,  
for what you have tamed”



Antoine de Saint-Exupéry, 1943. The Little Prince

