



Toward a More Complete Assessment of Climate Impacts

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Ethical Background Assumptions



1. When moral agents do something that might affect the welfare of others, that fact should matter to them in deciding what to do.
 - ▶ All other things equal, we ought to avoid courses of action that are detrimental to the welfare of others.
2. (At least some) animal welfare has direct ethical importance.
 - ▶ Welfare involves the quality of subjective experiences for animals that have such experiences.
 - ▶ Welfare vs. health, survival, reproduction, species-typical behavior



Climate Change: Effects on Animal Welfare

Direct Effects

- ▶ Heat, drought, sea level rise, ocean acidification
- ▶ Extreme weather events

Indirect Effects

- ▶ Migration/extinction of other organisms
- ▶ Economic disruption, political instability, armed conflict, human migration
- ▶ Strategies for mitigation/adaptation of climate change



Climate Impacts: What Gets Measured

IPCC 5th Assessment Report

What is discussed?

1. Economic effects
2. Effects on human welfare
3. Effects on ecosystem services
4. Effects on extinction rates
5. Effects on biodiversity

Only 2 mentions of animal welfare at all.

Do these adequately capture animal welfare?



Impacts on Animals

...[L]and use, and habitat fragmentation in particular, will pose serious impediments to species adaptation to climate change as it is projected to reduce the capacity of many species to track climate [F]uture species extinctions are a high risk because the consequences of climate change are potentially severe, widespread, and irreversible, as extinctions constitute the permanent loss of unique life forms (IPCC 5th AR, WG II report, p. 299).

Even species whose populations are not projected to decline rapidly over the next century can face a substantial 'extinction debt,' that is, will be in unfavorable climates that over a period of many centuries are projected to lead to large reductions in population size and increase the risk of extinction (IPCC 5th AR, WG II report, p. 301).

Is this just the desiccated language of science?



Impacts on Humans

- Increased likelihood of injury, disease, and death
- Destruction of homes
- Diminished agricultural yields
- Lost work capacity, decreased agricultural incomes
- Increased food prices, food insecurity, and under-nutrition
- Increased risks from food-borne, water-borne, and vector-borne diseases
- Increased likelihood of large-scale violent conflict
- Damage to the infrastructure, institutions, natural resources, social capital, and livelihood opportunities needed for adaptation



Impacts on Humans

- Risks to "normal human activities, including growing food or working outdoors"
- Increased displacement and migration
- Increased frequency of economic shocks
- Diminished access to education
- Damage to property
- Decreased ability to maintain infrastructure and provide social services
- Increased social upheaval
- Decreased individual, household, and community coping capacities; increased need for external assistance



Impacts on Humans

- ▶ Decreased psychological well-being and sense of security
- ▶ Increased "generalized anxiety, depression, aggression, and complex psychopathology[,] ... chronic psychological distress and increased incidence of suicide"
- ▶ Increased solastalgia ("a distressing sense of loss ... that people experience when their land is damaged")
- ▶ Threats to freedom and the capacity to live with dignity

What we care about in the case of humans is not just their existence, variety, and benefits to others. We care about quality of life – i.e., welfare.



Justifications for ignoring animal welfare?

1. Humans aren't responsible for the welfare of wild animals.
2. Impacts on animal welfare can't be measured.
3. Regarding climate change, human and animal interests converge.
4. The public doesn't care (enough) about the welfare of (wild) animals.



Conclusion

Consequences for animal welfare ought to be included when we consider the impacts of climate change.

