

Strategic considerations for effective wild animal suffering work

Animal Ethics

ABSTRACT: Due to the scale and neglectedness of wild animal suffering, increasing work on it could have a very high impact. This article presents some indications of how to do this effectively. The article addresses both how to gain more knowledge about the best ways to help animals and how to achieve a shift in attitudes about it. The article explains the distinction between foundational questions and high priority questions, and argues that it is on the latter that we should focus now. It then presents the kind of cross-disciplinary research needed for work in this field to develop, which incorporates approaches from ecology, animal welfare science, and related fields. Then, it presents several examples of research topics that appear to be especially promising, including wild animal vaccination, helping wild animals affected by weather events, helping wild animals in urban environments, animal contraception, and developing wild animal welfare assessment methods. Work on how to help animals on a large scale will also be useful in the long term. The article then argues that we should focus on making progress on the cause now, rather than under ideal circumstances. It then indicates what audiences should be especially targeted and the best ways to reach them. It argues that effective strategy will focus on specific cases and stressing how progress is possible. The paper concludes by presenting several examples of ways in which individuals and animal organizations interested in wild animal suffering can contribute to the development of the cause area.

Introduction

Wild animal suffering takes place at a huge scale, yet it has received relatively little attention. These two factors mean that increasing the work done in this field could potentially have a very high impact. On the other hand, the fact that

wild animal suffering has been so largely neglected can cause many people to be confused about what they can do to help to reduce it.

Since work on this topic started relatively recently, there is still a lot to learn about how to succeed in it. However, at this point we already have several important clues that can help us to work much more effectively. This article will present some of these.

To effectively help wild animals, we need those who are in a position to help to want to and be able to do it. Two main courses of action, which are interconnected, are needed: (1) gaining more knowledge about how to best help animals and (2) achieving a shift in attitudes about this topic, especially among certain key agents. Due to this, this paper will have two main parts: one about the kind of research it would be especially useful to promote, and the other one about how to spread concern for this topic.

In the first half of the article we will start by explaining the difference between foundational questions and high priority questions. We will argue that our focus should be on the latter, rather than the former. We will then examine what kind of work that is needed for research in wild animal suffering to develop as a new field of study. There is a need for cross-disciplinary work incorporating approaches from different disciplines, including mainly the sciences of ecology and animal welfare, as well as other related fields. Then, we will present several specific topics to research that appear to be particularly promising for raising concern about this issue and fostering new research. They include research on wild animal vaccination, ways to rescue animals affected by weather events, ways of helping animals in urban or agricultural environments, wild animal contraception, and ways to assess the welfare of animals in the wild. In addition, research on the ways to make the situation of animals better on a large scale will also be very helpful, though not necessarily in the short term.

In the second part of the article, we will first argue that we should focus on the kind of messaging that is more likely to trigger progress on the cause now, rather than under an ideal situation. We will then see which different audiences we should be reaching, and which ways it may be most useful to speak with each of them about helping wild animals. We will claim that focusing on specific cases

and stressing why and how progress is possible is strategically convenient. We will then consider other important ideas different from concern for wild animal suffering that can nevertheless, if spread, help increase concern for this cause. Finally, we will present some examples of things that people concerned with wild animal suffering can do to contribute to the development of work on it, both individuals and animal organizations.

Differentiating between foundational questions and high priority questions

It is sometimes assumed that the highest priority questions in a field are the ones that are the most foundational. In the case of wild animal suffering, the most fundamental questions are those related to how to assess the aggregate amount of positive and negative welfare that is present in different populations, species and ecosystems. This will allow us to estimate the cases in which suffering might prevail in the lives of animals.¹ More practically, on the basis of this we will be

¹ Ng, Y.-K. (1995) "Towards welfare biology: Evolutionary economics of animal consciousness and suffering", *Biology and Philosophy*, 10, pp. 255-285; Tomasik, B. (2015a [2009]) "The importance of wild animal suffering", *Relations: Beyond Anthropocentrism*, 3, pp. 133-152 [accessed on 3 December 2019]; Dorado, D. (2015) "Ethical interventions in the wild: An annotated bibliography", *Relations: Beyond Anthropocentrism*, 3, pp. 219-238 [accessed on 23 November 2019]; Faria, C. & Paez, E. (2015) "Animals in need: The problem of wild animal suffering and intervention in nature", *Relations: Beyond Anthropocentrism*, 3, pp. 7-13 [accessed on 30 September 2019]; Faria, C. (2016) *Animal ethics goes wild: The problem of wild animal suffering and intervention in nature*, PhD thesis, Universitat Pompeu Fabra; Alonso, W. J. & Schuck-Paim, C. (2017) "Life-fates: Meaningful categories to estimate animal suffering in the wild", *Animal Ethics* [accessed on 13 June 2021]; Horta, O. (2017) "Animal suffering in nature: The case for intervention", *Environmental Ethics*, 39, pp. 261-279; Animal Ethics (2020a) *Introduction to wild animal suffering: A guide to the issues*, Oakland: Animal Ethics [accessed on 3 April 2020]; Hecht, L. (2020a) "Why cause of death matters for wild animal welfare", *Blog, Wild Animal Initiative* [accessed on 22 October 2021];

able to compare which scenarios are better or worse from the point of view of the animals. We will then be able to assess whether certain measures can be expected to have a positive or negative impact for animals overall. Foundational research here would also include work on identifying the best ways to transform a negative scenario into one where there is less suffering.

These foundational questions can be useful for understanding what is at stake in the cause of wild animal suffering and the general ways in which we could effectively reduce it under ideal circumstances. They can also be important in order to communicate its significance to others. But this doesn't mean that only when such foundational questions have been thoroughly explored we will be able to, and should, start making progress in the field. It also doesn't mean that the way to maximize our efforts in gaining more knowledge and spreading more concern about the issue is by investing in learning more about the foundational questions. Working in a certain cause area does require a good understanding of what the foundational questions in the field are, and what the answers might be. But it often happens that this is not the only knowledge that is needed in order to make progress in a cause. This is true in the case of wild animal suffering. For us to achieve our aim of eventually helping wild animals, there are several high priority questions we need to answer at this point that are not foundational ones. The first one is: What research and actions, if done now, can we expect to influence the future to progress in the best direction to help wild animals? Answering this requires examining other questions as well. One of them is: What forms of helping wild animals are most likely to be supported by people in key groups such as animal advocates and policy makers, as well as by the general public? The more support we get, the faster the cause will grow, due to which

(2020b) "[Methods for studying wild animals' causes of death](#)", *Blog, Wild Animal Initiative* [accessed on 22 October 2021]; (2020c) "[How wild animals die: what we know so far](#)", *Blog, Wild Animal Initiative* [accessed on 22 October 2021] and (2021) "[The importance of considering age when quantifying wild animals' welfare](#)", *Biological Reviews*, 96, pp. 2602-2616 [accessed on 13 May 2021]; Soryl, A. A; Moore, A. J.; Seddon, P. J. & King, M. R. (2021) "[The case for welfare biology](#)", *Journal of Agricultural and Environmental Ethics*, 34, a. 7 [accessed on 24 November 2021].

finding noncontroversial ways to help animals can make a very important difference. Another question is: Which lines of research in the field are most likely to be of interest and appeal to scientists and life science students? If we identify the topics on which scientific work is more likely to trigger further research, then in the long run promoting work on those topics will have a higher impact. Fortunately, the answers to these two questions overlap to a great extent, as the lines of research that scientists are more likely to find interesting will coincide to a great extent with those the public finds worth working on.

What kind of research is needed?

Animal welfare science was established decades ago to study the situation of nonhuman animals from the viewpoint of how they themselves feel.² It has been focused on the situation of animals kept in captivity, rather than those living in the wild, but the knowledge acquired in this field can be applied to other animals as well. There are, however, important limitations to the use of this knowledge. To start with, the methods of welfare assessments currently existing were developed for animals kept in captivity by humans. More work would be needed to adapt these methods so they can be successfully applied in the case of wild

² Broom, D. M. (1988) "The scientific assessment of animal welfare", *Applied Animal Behaviour Science*, 20, pp. 5-19; Fraser, D. (2008) *Understanding animal welfare: The science in its cultural context*, New York: John Wiley and Sons; Haynes, R. P. (2008) *Animal welfare: Competing conceptions and their ethical implications*, Dordrecht: Springer; Mellor, D.; Patterson-Kane, E. & Stafford, K. J. (2009) *The sciences of animal welfare*, Hoboken: Wiley-Blackwell; Walker, M.; Díez-León, M. & Mason, G. (2014) "Animal welfare science: Recent publication trends and future research priorities", *International Journal of Comparative Psychology*, 27, pp. 80-100 [accessed on 1 July 2021]; Hemsworth, P. H.; Mellor, D. J.; Cronin, G. M. & Tilbrook, A. J. (2015) "Scientific assessment of animal welfare", *New Zealand Veterinary Journal*, 63, pp. 24-30; Mellor, D. J.; Beausoleil, N. J.; Littlewood, K. E.; McLean, A. N.; McGreevy, P. D.; Jones, B. & Wilkins, C. (2020) "The 2020 five domains model: Including human-animal interactions in assessments of animal welfare", *Animals*, 10, a. 1870 [accessed on 17 June 2021].

animals.³ More importantly, such assessments only allow us to know whether animals may suffer under certain circumstances, for instance, if they are hungry, sick, cold, etc. But they don't tell us anything about what external factors cause animals to be in such circumstances in a certain ecosystem. That is, what factors existing in an ecosystem may cause them to be hungry, sick, cold, etc.

In order to know this we need to learn how animals in an ecosystem relate to other organisms and their physical environment, and how their environment can change in ways that affect those relations. That is, we need the kind of knowledge that the science of ecology and related disciplines provide. This is similar to the case of conservation biology, which combines the knowledge gathered in different fields with the aim of maintaining the existence of certain entities such as species, populations, or ecosystems. In our case, we would be using information from multiple disciplines to learn about the wellbeing of animals and to achieve the aim of preventing the suffering and other harms nonhuman animals undergo.

This could be considered a type of cross-disciplinary research. Cross-disciplinarity is not exactly the same as interdisciplinarity. The latter occurs when the work of different disciplines is combined in an integrated way. Cross-disciplinary work occurs when one field is considered from the perspective of

³ Kirkwood, J. K.; Sainsbury, A. W. & Bennett, P. M. (1994) "The welfare of free-living wild animals: Methods of assessment", *Animal Welfare*, 3, pp. 257-273; Jordan, B. (2005) "Science-based assessment of animal welfare: Wild and captive animals", *Revue scientifique et technique (International Office of Epizootics)*, 24, pp. 515-528 [accessed on 14 May 2021]; Botreau, R.; Veissier, I.; Butterworth, A.; Bracke, M. B. & Keeling, L. J (2007) "Definition of criteria for overall assessment of animal welfare", *Animal Welfare*, 16, pp. 225-228; Kirkwood, J. K. (2013) "Wild animal welfare", *Animal Welfare*, 22, pp. 147-148; JWD Wildlife Welfare Supplement Editorial Board (2016) "Advances in animal welfare for free-living animals", *Journal of Wildlife Diseases*, 52, pp. S4-S13; Brennan, O. (2018 [2017]) "'Fit and happy': How do we measure wild-animal suffering?", *Wild Animal Suffering Research*, [accessed on 30 October 2019].

other fields or, in other words, with the lens that would be used in other fields.⁴ In this case, work in the science of ecology and related fields would be approached through the lens of animal welfare science. This new field has been termed “welfare biology.”⁵

The good news is that a lot of the work already done in the science of ecology and related fields is highly relevant for examining the conditions that can affect an animal’s wellbeing. This happens, for instance, with some of the work done in behavioral ecology because the behavior of animals is closely linked to how they are feeling, and can therefore give us useful information about the circumstances under which their needs can be met.⁶ Studies examining how animal populations can be negatively affected by external conditions are relevant too. For instance,

⁴ Frodeman, R. (ed.) (2017) *The Oxford handbook of interdisciplinarity*, Oxford: Oxford University Press.

⁵ Ng, “Towards welfare biology: Evolutionary economics of animal consciousness and suffering”, *op. cit.*; Faria, C. & Horta, O. (2019) “Welfare biology”, in Fischer, B. (ed.) *Routledge handbook of animal ethics*, New York: Routledge, pp. 455-466; Salazar, M. (2019) “Why is welfare biology important?”, *Blog, Animal Charity Evaluators*, July 31; Soryl, et al. “The case for welfare biology”, *op. cit.*.

⁶ See for instance Swaisgood, R. R. (2007) “Current status and future directions of applied behavioral research for animal welfare and conservation”, *Applied Animal Behaviour Science*, 102, pp. 139-162; Beausoleil, N. J.; Mellor, D. J.; Baker, L.; Baker, S. E.; Bellio, M.; Clarke, A. S.; Dale, A.; Garlick, S.; Jones, B.; Harvey, A.; Pitcher, B. J.; Sherwen, S.; Stockin, K. A. & Zito, S. (2018) “‘Feelings and fitness’ not ‘feelings or fitness’—the *raison d’être* of conservation welfare, which aligns conservation and animal welfare objectives”, *Frontiers in Veterinary Science*, 5, a. 296 [accessed on 14 February 2021]; Brakes, P. (2019) “Sociality and wild animal welfare: Future directions”, *Frontiers in Veterinary Science*, 6 [accessed on 18 February 2021]; Linklater, W. L. & Gedir, J. V. (2011) “Distress unites animal conservation and welfare towards synthesis and collaboration”, *Animal Conservation*, 14, pp. 25-27; Cattet, M. R. (2013) “Falling through the cracks: Shortcomings in the collaboration between biologists and veterinarians and their consequences for wildlife”, *ILAR Journal*, 54, pp. 33-40 [accessed on 19 January 2021]. See also Capozzelli, J. (2019) “Applying the conservation evidence database to wild animal welfare”, *Wild Animal Initiative* [accessed on 30 May 2021].

what we know about the levels of mortality due to factors such as hunger, disease, weather conditions and other circumstances will be extremely relevant. In addition, work on issues such as life history theory (especially age-specific mortality) and population ecology can provide important guidance for some of the more foundational questions about the extent to which there is suffering in different animal populations, and its proportion in relation to positive wellbeing.⁷ Finally, studies of the composition of different ecosystems can help to assess those foundational questions for ecosystems as a whole.

Due to this, part of the work that could be done in this field, at least in its early stages, could consist not necessarily in field research, but in literature reviews from the point of view of the animals' wellbeing. In this way, knowledge that has already been gathered could be approached in a new light. What would need to be done, so to speak, is to translate all the information that is available into terms of how animals are affected by the factors that were studied.

Promising topics to research

In two recent studies on this issue, Animal Ethics researched the attitudes toward different ways of helping wild animals by interviewing scholars and students in biology, veterinary science, environmental studies, and other related fields.⁸ At least three key lines of research were found to be interesting to both scientists and students: wild animal vaccination programs, ways to improve the wellbeing of animals affected by extreme weather events, and ways to help

⁷ Sæther, B. E.; Coulson, T.; Grøtan, V.; Engen, S.; Altwegg, R.; Armitage, K. B.; Barbraud, C.; Becker, P. H.; Blumstein, D. T.; Dobson, F. S. & Festa-Bianchet, M. (2013) "How life history influences population dynamics in fluctuating environments", *The American Naturalist*, 182, pp. 743-759; Faria & Horta, "Welfare biology", *op. cit.*; Hecht, "The importance of considering age when quantifying wild animals' welfare", *op. cit.*

⁸ Animal Ethics (2019a) *Scientists' attitudes toward improving the welfare of animals in the wild: A qualitative study*, Oakland: Animal Ethics [accessed on 26 January 2021] and (2020b) *Surveying attitudes toward helping wild animals among scientists and students*, Oakland: Animal Ethics [accessed on 26 January 2021].

animals in urban areas. This means that research on these three actions appears to be very promising. In addition, there are some other lines of research that might be useful, which we will see below.

Vaccination research

Animals are vaccinated primarily for anthropocentric reasons, with the aim of preventing certain diseases in wild animals from spreading to humans or to animals that humans live with or exploit as resources. However, vaccination has a very positive impact on the vaccinated animals themselves.

For a start, vaccination programs can save the lives of a large number of animals and spare them substantial amounts of suffering. These programs have proven to be quite reliable to date, yielding remarkable results in the case of diseases such as anthrax, rabies, tuberculosis, rinderpest, sylvatic plague, and among others.⁹ Due to this, work in this field can be a very useful way to develop research in wild animal health.

In this regard, several steps can be taken to improve and expand wild animal vaccination efforts. First, animals are not vaccinated against all the diseases they suffer from. In light of this, it would be positive to expand vaccination efforts to

⁹ Turnbull, P. C. B.; Tindall, B. W.; Coetzee, J. D.; Conradie, C. M.; Bull, R. L.; Lindeque, P. M. & Huebschle, O. J. B. (2004) "Vaccine-induced protection against anthrax in cheetah (*Acinonyx jubatus*) and black rhinoceros (*Diceros bicornis*)", *Vaccine*, 22, pp. 3340-3347; Slate, D.; Rupprecht, C. E.; Rooney, J. A.; Donovan, D.; Lein, D. H. & Chipman, R. B. (2005) "Status of oral rabies vaccination in wild carnivores in the United States", *Virus Research*, 111, pp. 68-76; Garrido, J. M.; Sevilla, I. A.; Beltrán-Beck, B.; Minguijón, E.; Ballesteros, C.; Galindo, R. C.; Boadella, M.; Lyashchenko, K. P.; Romero, B.; Geijo, M. V.; Ruiz-Fons, F.; Aranaz, A.; Juste, R. A.; Vicente, J.; Fuente, J. de la and Gortázar, C. (2011) "Protection against tuberculosis in Eurasian wild boar vaccinated with heat-inactivated *Mycobacterium bovis*", *PLOS ONE*, 6, e24905 [accessed on 11 May 2021]; World Organisation for Animal Health (2011) "Rinderpest", *World Organisation for Animal Health* [accessed on 5 May 2020]; Prairie Dog Coalition (2018) *Prairie dogs, people and plague*. Boulder: Humane Society of the United States [accessed on 2 May 2020].

cover more diseases. In particular it would be a great step to do this out of a concern for wild animals themselves, even in the case of diseases that do not indirectly affect human interests. Alongside this, it would be important to learn more about the ways vaccination can indirectly affect other animals.

Helping animals affected by weather events

Harmful weather events are one of the causes of animal suffering and death in the wild. Prevention and rescue work is therefore a promising area of research. Many animals are saved from fires, floods, hurricanes, and other natural disasters by people who work to rescue them from these situations. Along with this, taking precautionary measures can minimize casualties, for example, by building shelters where some animals can take refuge when it rains or snows, or when it is too cold or too hot for them.¹⁰

Some people believe that we should only help animals when they are in need of aid due to anthropogenic causes. This is problematic for several reasons, because the fact that animals are suffering should matter to us, not the source of their plight. At any rate, this objection cannot be considered very strong today, due to the fact that almost all ecosystems have already been transformed by humans in one way or another. Even those that have remained less altered have been modified due to anthropogenic climate change. Because of this, and due also to the growing concern of many people about climate change, there are reasons to believe that many people, particularly scientists, will support helping animals affected by weather events, especially extreme ones.

¹⁰ Bovenkerk, B.; Stafleu, F.; Tramper, R.; Vorstenbosch, J. & Brom, F. W. A. (2003) "To act or not to act? Sheltering animals from the wild: A pluralistic account of a conflict between animal and environmental ethics", *Ethics, Place and Environment*, 6, pp. 13-26; Sawyer, J. & Huertas, G. (2018) *Animal management and welfare in natural disasters*. London: Routledge; Gutiérrez, J. & de Miguel, J. (forthcoming) "Fires in nature: Review of the challenges for wild animals", *European Journal of Ecology*.

Helping animals in urban or agricultural environments

One understandable concern about trying to improve the situation of animals is that, if our actions are not adequately informed, we might end up having an overall negative impact on animals living in the wild because they live in complex ecosystems. This concern should not lead us to inaction, but to do more research on how to help. In addition, there are many ways to help wild animals that can be done in ecosystems that are easier to monitor. This happens in the case of measures aimed at reducing the suffering of animals living in urban, suburban, and industrial areas. These animals include birds, small mammals and reptiles, many types of invertebrates, and also larger animals in some regions. The harms these animals suffer are not only anthropogenic, but also natural ones. The ecosystems in such areas may diverge significantly. In any case, they are not wilderness areas, and it might be easier to study and monitor the effects of our efforts there, considering especially their indirect effects. The results of this research can be applied in agricultural areas and then in the wild.

There is a substantial body of research that is relevant to this topic, although it has not been studied as such. Urban ecology is a well-established field that has studied the population dynamics and life history of many urban animals, as well as other factors that affect their welfare, such as their interactions with other animals, the conditions that limit the growth of their populations, and the ways in which they are affected by urban spaces.¹¹

¹¹ Hadidian, J. & M. Baird (2001) "Animal welfare concerns and the restoration of urban lands", *Ecological Restoration*, 19, pp. 271-272; Krimowa, S. (2012) *Pigeons and people: Resource ecology and human dimensions of urban wildlife*, master's thesis, Wellington: Victoria University of Wellington; Hunold, C. (2019) "Green infrastructure and urban wildlife: Toward a politics of sight", *Humanimalia*, 11, pp. 89-108 [accessed on 24 November 2020]; Animal Ethics (2019b) "Introduction to urban welfare ecology research", *Blog, Animal Ethics*, 20 December; (2021) Investigating the welfare of wild animals in urban environments, Oakland: Animal Ethics [accessed on 12 November 2021]; Collins, M. K.; Magle, S. B. & Gallo, T. (2021) "Global trends in urban wildlife ecology and conservation", *Biological Conservation*, 261, a. 109236.

Some of these animals have been studied for anthropocentric reasons because their presence is in some cases considered to be inconvenient by humans. But this knowledge can be used for the benefit of the animals: the existence of large populations can be negative for the animals themselves if most of them have short lives in which suffering is nearly everything they will experience. A good outcome would be to have relatively small populations, favoring the presence of animals that tend to have better lives in these environments over the presence of animals whose conditions may be harsher.

In addition to these three key areas of research identified by the aforementioned studies, there are others that may also have great potential in increasing our impact in the field. They are the following:

Contraception

Wild animal contraception has been researched and sometimes implemented already.¹² What is especially interesting about this is that contraception can be beneficial in making it possible to implement other measures.

To see why, consider an example. Suppose that there is a certain population of animals that is suffering due to disease, and suppose that we have the opportunity to help them. However, if we do so, there is a risk that the population will grow substantially and, in the end, we will be postponing the problem rather than solving it. But if we combine our help with contraception measures, we will not only improve the present situation of this population, but we will also prevent the problem in the future.

This example shows how contraception allows us to make efforts that can greatly improve the lives of animals in the wild which we might otherwise be unable to do without negative effects occurring.

¹² Cohn, P. & Kirkpatrick, J. F. (2015) "History of the science of wildlife fertility control: Reflections of a 25-year international conference series", *Applied Ecology and Environmental Sciences*, 3, pp. 22-29 [accessed on 18 February 2021]; Ansari, A. S.; Ayesha, B. & Lohiya, N. K. (2017) "Fertility control modalities in animals: An overview", *BAOJ Veterinary Science*, 1, a. 004.

Work on ways to assess the welfare of animals in the wild

In recent decades, scientists have become increasingly interested in assessing animal welfare through the development of assessment methods that include the consideration of health, physiological, and behavioral parameters. Most of these methods have focused on animals used by humans, especially domesticated animals or animals in captivity. However, some methods have also been proposed to evaluate the welfare of those living in the wild. Work on their wellbeing has the potential to improve their situation and to encourage further study of the wellbeing of wild animals in general.¹³ Specifically, it could help to develop or establish certain welfare assessment methods. This will help to provide tools to determine whether the situation of animals is negative or positive, and thus other welfare biology studies can be carried out more efficiently.

Work on how to have an impact on a large scale

In addition to assessments of the welfare of individual animals, it may be possible to make rough appraisals on a large scale to determine which animals, on the basis of their life histories, tend to have worse and better lives. This can be done considering factors such as their age-specific mortality and their typical causes of death. Accordingly, we can make an estimation of the proportion of suffering with relation to positive welfare.

Furthermore, such research in combination with the study of the populations that inhabit a certain ecosystem could provide us with even more useful information. It would allow us to calculate estimates of how much aggregate suffering, in absolute terms and in proportion to positive wellbeing, there might be in certain ecosystems. This would allow us to make comparisons between the suffering that is present in different types of ecosystems as well as in different ecosystems considered as tokens, i.e., considering one particular ecosystem as opposed to another. In the future, this could be tremendously helpful. Given this, we need to bear in mind that ecosystems are continually changing and evolving,

¹³ See note 3 above.

and humans are also intervening in them all the time. We can therefore use this knowledge to make decisions that can be very beneficial, rather than harmful, for animals.

Efforts to reduce suffering can be taken into account, for example, when implementing reforestation plans. If we have good reasons to think that a certain type of ecosystem contains more suffering than another, we will have good reason to promote the development of the latter rather than the former. In this way, we might want to promote incorporating these considerations into reforestation plans. We might also want to favor efforts promoting the presence of those animals who tend to have good lives and whose existence in a particular area prevents that of other animals who tend to have worse lives. An example is efforts to protect certain large herbivores who tend to have very few offspring, typically have long lifespans, and who eat large amounts of biomass that would otherwise be eaten by very large numbers of small animals who typically die shortly after coming into existence and suffer greatly in the process.

Work identifying other ways of helping animals

In addition to this, there may be other promising topics of research that we haven't considered here. If so, it seems likely that they will have some features in common with the ones we have mentioned. As indicated above, they would be especially helpful if they are noncontroversial, likely to be researched soon, and likely to foster future work. In addition, if their potential is great in terms of helping a large number of animals, then these topics would be optimal.

Work outside natural sciences

Finally, people working in fields other than natural sciences can also make important contributions. A lot of the work done thus far has been done in the field of animal ethics. Work in law and politics regarding how to best incorporate the protection of wild animals as sentient individuals in policy would also be very

important. In addition, work in other social sciences concerning how can we best promote concern for this issue can be very helpful as well.

Raising awareness

As happens with research, much work on wild animal suffering remains to be done in the area of communication and dissemination. But there is a very high risk of doing this in ways that are suboptimal or even counterproductive. This is mainly because there are still many people who find the idea of helping wild animals too new and strange when it is not illustrated with actual examples. Depending on how we present this idea to them, and also on who they are, such ideas could be accepted or rejected by them.

For this reason, it is very important to follow a strategic approach to raising awareness that is focused on what seems likely to have the highest impact considering the present situation, rather than what could have the highest impact in some ideal situation (for instance, if our audiences weren't biased, and if they all had a similar attitude and knowledge of the relevant issues sufficient to fully understand all the implications involved). Our messaging cannot be independent of the context, but must be extremely sensitive to it. Because of this, it may change through time, as awareness on the topic grows. Accordingly, it may be adequate in the future to present it in bolder ways, while at present we should be more careful with framing it appropriately (this is similar to something we saw in the case of research, when we distinguished foundational questions and high priority questions).

We'll now see some indications that can be useful to avoid communication problems and optimize the effects of our efforts.

Examples of ways of helping wild animals

Explaining the ways we can feasibly help wild animals is very important, as otherwise many people might think this is a hopeless cause. We have seen above some promising lines of research that focus on different ways of helping animals:

helping animals affected by weather events, including helping animals in urban areas, vaccination, contraception, and choosing options in reforestation or conservation that are better for animals. In addition to these, of course, it can be useful to mention other ways of helping animals that may not help very large number of them, but that are nevertheless widely accepted as good and that could gain a lot of support to be put into practice. These include individual actions such as rescuing animals drowning in ponds or mud ponds, stranded on beaches, trapped in holes or frozen lakes, as well as adopting orphaned or injured animals. They also include building shelters for them and supporting rescue centers for sick or orphaned animals.

Depending on the context, it may be useful in some very specific cases to mention other possible ways that could help larger numbers of animals but that are much more controversial.¹⁴ As a general rule, however, it might be better not to address these methods and to emphasize instead those that can be more realistically implemented in the short term, which are more likely to be supported by most people.

Distinguishing our audiences and how to speak with them

There are different people we need to pay special attention to. Depending on who they are, it might be better to reach them in different ways.¹⁵

¹⁴ These include those involving engineering ecosystems at very large scales.

¹⁵ On the attitudes toward helping wild animal advocacy among different groups see Morris, M. C. & Thornhill, R. H. (2006) "Animal liberationist responses to non-anthropogenic animal suffering", *Worldviews*, 10, pp. 355-379; Feber, R. E.; Raebel, E. M.; D'cruze, N.; Macdonald, D. W. & Baker, S. E. (2017) "Some animals are more equal than others: Wild animal welfare in the media", *BioScience*, 67, pp. 62-72 [accessed on 19 February 2021]; Waldhorn, D. R. (2019) "Toward a new framework for understanding human-wild animal relations", *American Behavioral Scientist*, 63, pp. 1080-1100; Animal Ethics, *Surveying attitudes toward helping wild animals among scientists and students*, *op. cit.*

Different audiences

Scientists. The people who could work on the lines of research mentioned above include mainly professionals and students working in life sciences, especially in ecology, in other areas of biology, and in veterinary science. They also include researchers working in other academic disciplines.

People working in policy and law. In addition, we could have a substantial impact by reaching and influencing policy makers and legislators. The idea that new public policies or pieces of legislation could be introduced to help wild animals is not at all unrealistic. This is so especially in the specific areas of work listed above that are supported by many people among the general public.

Animal activists. Another group that seems particularly important to target is people involved in animal advocacy. Animal activists are a growing force that can have a great impact in the future and are already having an impact in changing many things around them. Wild animal suffering should be incorporated as one of their areas of concern.

The general public. Finally, it is also important to reach those groups within the general public that are more likely to be sympathetic about the plight of wild animals. In this way we can start to create a social climate that is more appropriate for the introduction of measures to help wild animals. It could be especially important to reach young people, and particularly influencers among them such as people active on social media and online content creators, who could play an important role in spreading concern about wild animals.

Ways to address different people

The way we can reach people in these different groups will vary according to several factors. These include the likelihood they have of agreeing with some or other points concerning helping wild animals and the language they are familiar with. The following considerations may be useful to bear in mind when speaking with different people:

Focusing on scientific research. The topics to raise and the language to use when addressing scholars should be determined by the kind of research that people working in this field can do and with the terminology that is standard in scientific practice. This need not be the one that is typically used in advocacy work. In fact, the people spreading concern among academics about this topic should be people working in academia themselves, or if not, at least people very familiar with academia and natural science.

Focusing on achieving policy and legal progress. The issues to mention when speaking to politicians will in turn be determined by the kind of policies that would be feasible to support or implement at this particular point. It will be important to emphasize the idea that these policies would be in line with other general animal protection initiatives, rather than with conservationist ones. In this way the communication potential of these measures will be much greater.

Focusing on achieving more wild animal advocacy work. It is necessary to provide people involved in animal advocacy more comprehensive explanations of the different ways to help wild animals and of the importance of wild animal suffering. This is especially necessary in the case of people leading or involved in animal organizations. Most animal organizations have not worked on this topic so far. However, there are ways they could easily incorporate support for helping wild animals in their messaging. Moreover, there are also some campaigns for helping wild animals that the public would support but that animal organizations are not working on now, often due to lack of knowledge about them. It is therefore important to raise concern about wild animal suffering among the people who can change this. It is also especially important in this case to distinguish between the different implications of helping wild animals as individuals and of other goals such as environmentalist or conservationist ones. Wild animal suffering is often confused with things like species extinction or environmental destruction; this is a confusion that should be avoided or else we will not be able to spread concern focused on the harms suffered by wild animals.

Focusing on getting more social support. Finally, in the case of other people, the focus of our messaging s may depend on the circumstances and on who we are

speaking with, although in general it seems advisable to stress the ways of helping animals that most people find appealing. Again, distinguishing wild animal suffering from conservation is important, although it is important to do this in ways that don't alienate people.

General considerations in message framing

Finally, there are two general considerations that are important to bear in mind when reaching people of any of the aforementioned groups. They are the following:

The need to point to specific cases. It appears that people find the abstract idea of reducing wild animal suffering more difficult to accept than most of the concrete example of ways in which it can be done. This being so, it seems better to spread concern about this issue by focusing on specific examples of ways of helping wild animals.

The need to stress that it is actually possible to help wild animals. It also happens that many people are unfamiliar with the different ways of helping wild animals, due to which at first they may be skeptical about whether we can succeed in reducing wild animal suffering. For the same reason it is always important to stress the tractability of the different measures that can be implemented in order to help animals.

Other ideas potentially helping to increase concern for wild animal suffering in the long term

We have considered different ways to directly increase support for helping wild animals. We will now see other ideas that, while not being directly about this, can be useful in increasing support for helping wild animals, especially in the long run.

Concern for sentience. To start with, it is important to promote the moral consideration of all sentient beings in general.¹⁶ We must bear in mind that the reasons to give them moral consideration are still ignored by the majority of people. Spreading this concern is especially important in the case of wild animals, as there is a tendency to consider them only as part of certain species or ecosystems. Even animal activists often accept this view, when they speak of species and ecosystems being threatened instead of speaking of individual animals being harmed.

Consideration for invertebrates. Also, because most animals (both among wild animals and among those used by humans) are small invertebrates, we should raise concern especially about these animals, because many people, including animal advocates, care only or almost only about large animals such as mammals or large vertebrates.¹⁷ Many people from the general public, while indifferent toward many invertebrates, have sympathy for some of them (such as butterflies, bees, and hermit crabs, among others). Using imagery involving these animals can thus be useful for conveying a message of concern for all invertebrates in general.

Longtermism. Moreover, because many more wild animals will exist in the long term than in the short term, and also because in the future it may be possible to

¹⁶ See Animal Ethics, *Introduction to wild animal suffering*, *op cit.*, part 2.

¹⁷ See Tomasik, B. (2015b [2009]) "How many wild animals are there?", *Essays on Reducing Suffering*, Aug 07 [accessed on 12 October 2019]. See also Horvath, K.; Angeletti, D.; Nascetti, G. & Carere, C. (2013) "Invertebrate welfare: An overlooked issue", *Annali dell'Istituto superiore di sanità*, 49, pp. 9-17; Birch, J. (2017) "Animal sentience and the precautionary principle", *Animal Sentience: An Interdisciplinary Journal on Animal Feeling*, 16 (1) [accessed on 14 July 2021]; Carere, C. & Mather, J. (eds.) (2019) *The welfare of invertebrate animals*, Dordrecht: Springer. See also Animal Ethics (2019c) "Invertebrate sentience: A review of the neuroscientific literature", *Sentience, Animal Ethics* [accessed on 18 February 2021]; (2021d) "Invertebrate sentience: A review of the behavioral evidence", *Blog, Animal Ethics*, 30 May [accessed on 21 November 2021].

help animals more significantly, it may also be helpful to promote a longtermist approach that highlights the importance of the future and that all sentient beings matter equally regardless of whether they will live in the short or the long term.¹⁸

The spread of these ideas is not in itself sufficient to increase concern for wild animal suffering. Still, it can be useful in combination with information about the whys and hows of helping wild animals. Spreading these ideas is also good for other reasons. It can also help to raise concern about other sentient beings who may exist in the future, such as those animals who will be exploited by humans. This means that there is no conflict between longtermist work for wild animals and for other animals. Rather, there is a convergence in the ideas that need to be spread to attain the best results for all sentient beings in the long term. Therefore, it seems we have strong reasons to incorporate it in our messaging to at least most of our target publics.

Ideas for getting involved in wild animal suffering work

In light of what we have seen above, there are different ways in which people wanting to make a difference for wild animals can get involved. This will depend very much on whether they are individuals or organizations. We will now look at two lists of things people can do either as individuals or in their organizations to help the cause area to develop.

¹⁸ Eckerström Liedholm, S. (2019) "Persistence and reversibility: Long-term design considerations for wild animal welfare interventions", *Wild Animal Initiative*, [accessed on 28 November 2020]. Regarding longtermism in general see Greaves, H. & MacAskill, W. (2021) "The case for strong longtermism", *GPI Working Paper No. 5* [accessed on 14 July 2021]. Regarding longtermism and animal advocacy see Baumann, T. (2020) "Longtermism and animal advocacy", *Center for Reducing Suffering* [accessed on 23 August 2021].

What people can do individually

- Share publications about wild animal suffering on social media, especially those published by organizations working in the field.
- Support animal organizations working on wild animal suffering and ask how to collaborate with them.
- Translate materials about wild animal suffering to other languages.
- Help to organize events where wild animal suffering is discussed.
- Organize reading groups of materials about wild animal suffering (our wild animal suffering YouTube video course can be useful for that).¹⁹
- If they are online content creators, writers, journalists, artists, or educators, they can create their own materials addressing the issue and reach many others.
- If they are researchers, they can do work on some of the lines of research indicated above.

What animal organizations can do

- Mention concern for wild animal suffering in their general educational materials. They can go as deep in the issue as they see fit, depending on the format of the materials and how familiar they are with the topic. They may make general mentions of the topic or instead just give some concrete noncontroversial examples.
- In their social media, every now and then they can publish a story about animals being helped in the wild, mentioning that this is positive for animals.

¹⁹ Animal Ethics (2020c) *Wild animal suffering video course*, Animal Ethics [accessed on 14 December 2020]. See also Animal Ethics, *Introduction to wild animal suffering*, *op cit.*,

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- If they organize events, they can invite people knowledgeable about wild animal suffering to speak about the issue.
- If they have training sessions to increase their staff or volunteer groups' knowledge on animal-related issues, they can invite advocates working in wild animal suffering to speak about the work they do.
- If they are organizations focused on research, they can work on the lines of research listed above as especially promising.
- If they are organizations focused on lobbying work, they can run campaigns such as the following:
 - Implementation of vaccination programs helping wild animals as an alternative to killing them to prevent the diseases from being transmitted to domesticated animals humans exploit, like animals in farms.
 - Implementation of contraception programs as an alternative to killing animals of populations considered to be too large.
 - Implementation of protocols for preventing harms to animals and rescuing them during floods, wildfires, hurricanes, and other extreme weather events or natural disasters.
 - Implementation of feeding programs combined with contraception to save the lives of animals starving during severe droughts or especially heavy winters.
 - Passing laws requiring wild animal welfare assessments for interventions affecting wild animals.
 - Passing laws including the role of wild animal welfare veterinary scientists in wildlife management agencies.

These are just some general suggestions. Animal organizations can speak with other people or organizations working in wild animal suffering to see what other ideas they can suggest.

Conclusion

While wild animal suffering has received very little attention until now, there is huge potential for progress in it. One important impediment today to making more progress is the lack of involvement by potential supporters who are sympathetic to helping wild animals. This is often due to a lack of awareness of the ways in which work in this field can be done. This article has tried to shed more light on this in order to make it easier for people concerned about the plight of wild animals to do something about it.

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