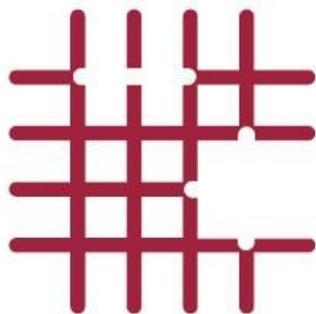


Weighing Wildlife Welfare

'Application of the wildlife assessment framework'



COUNCIL ON
ANIMAL AFFAIRS

Cover letter

The Hague, October 2017

Our reference: RDA.2017.152

Your Excellency,

On behalf of the Council on Animal Affairs (Raad voor Dierenaangelegenheden, RDA), I am pleased to present to you this advisory report entitled "Weighing Wildlife Welfare", which the Council has produced on its own initiative.

The position of animals in the wild and the form in which society should organise responsibility for their welfare is a topic of frequent public discourse in the Netherlands, whether it be a wolf roaming into our country from across the eastern border, an eagle owl that sets its sights on passers-by, meadow birds that sparsely get their chicks raised or cattle and big game in the Amsterdamse Waterleidingduinen (nature reserve in the dunes near Amsterdam, that also helps supply drinking water) or Oostvaardersplassen Nature Reserve.

The Council on Animal Affairs places a high value on ensuring a coherent policy for the treatment of wildlife which is supported by scientific evidence and transparent to all. In its 2012 advisory report "Duty of Care, Naturally" it therefore published an assessment framework to provide guidance in decisions connected to non-captive animals. Given the very broad scope of both animal welfare policy and nature conservation policy, the Council deemed it advisable to study the practical applicability of the assessment framework for several animal species, which has resulted in the advisory report now before you. The Council has also clarified the lines of thought and reasoning that have gone into this assessment framework. Furthermore the Council has sought information during this process from the Amsterdamse Waterleidingduinen and discussed a final draft of the advisory report with policy workers and lawyers of the Nature Legislation Working Group, secretaries of the Fauna Management Unit (FBE) and representatives of the Social Advisory Council on Fauna Damage (Maatschappelijke Adviesraad Faunaschade), where it was well received.

This application yielded a number of recommendations to the State and provinces. For example, to clarify how animal welfare is taken into account in considerations and decisions concerning animals in nature. An explicit focus on the welfare of non-captive animals when formulating policy can contribute to reducing the number of differences in the regulations on animal and nature conservation policy. The Council further notes that it is not always clear that responsibility for animal welfare policy for captive animals lies with the State and for non-captive animals with the provinces, and therefore wishes to know how the welfare of non-captive animals in nature is safeguarded. When are both the State and the provinces satisfied?

The Council is of course available to provide verbal clarification and is willing to provide your Ministry and other parties involved with advice on the implementation of the recommendations in this advisory report.

Yours sincerely,

M.H.W. Schakenraad
Secretary of the Council on Animal Affairs

Contents

Procedure	5
Overview	5
Summary	6
1. Introduction	9
1.1 Motivation.....	9
1.2 Background.....	10
1.2.1 Socio-ethical debate.....	10
1.2.2 Laws and regulations.....	13
1.3 Scope.....	15
1.4 Central question	17
2. Application of the assessment framework	19
2.1 Assessment framework and flow chart.....	19
2.1.1 Explanation	19
2.1.2 Previous applications.....	22
2.2 Application of flow chart	24
2.2.1 Preceding questions and steps.....	24
2.2.2 Application of the flow chart.....	26
2.2.3 Focus areas.....	28
3. Reflection on the application of the assessment framework and flow chart . 29	
3.1 Urban foxes	29
3.2 Wolves crossing the border	30
3.3 Decline of meadow birds.....	31
4. Review and recommendations	32
Bibliography	35
Annex 1 Definitions and principles	38
Annex 2 Flowchart and assessment framework	40
Annex 3 Urban foxes case study	42
Annex 4 Wolves crossing the border	51
Annex 5 Decline of meadow birds case study	58
Publication details	65

Procedure

This advisory report from the Council on Animal Affairs (Raad voor Dierenaangelegenheden, RDA) was prepared by a panel of Council members comprising Mr A.G. Dijkhuis, Prof. A.A. Freriks, Prof. S. Haring, Ms J. Hesterman, Ms M. de Jong, Mr M.H.A. Steverink and Prof. J.J.M. van Alphen & Mr J. Kaandorp (joint chairmanship), with support provided by Dr F.L.B. Meijboom. We would also like to acknowledge Frauke Ohl† for her contribution to the preparation of this report and the final adjustments to the assessment framework. The panel convened on six occasions for the purpose of preparing the report and received assistance in the execution of its activities from Mr M.H.W. Schakenraad and Ms R.L. van Oudheusden, respectively Secretary and Deputy Secretary of the RDA team. This advisory report was produced on the Council's own initiative.

Overview

This advisory report begins with an introductory chapter on the background and framework of the report, as well as the reasons for its drafting. Chapter 2 provides further information on the RDA assessment framework and the flow chart, as well as the questions which are addressed in this respect. In Chapter 3, we look back at the various ways in which the assessment framework and the flow chart can be used for the "Urban foxes", "Wolves crossing the border" and "Decline of meadow birds" case studies, which are outlined in greater detail in the annexes. Chapter 4 subsequently discusses how the assessment framework and flow chart may serve to guide policy and to identify any further focus areas.

Summary

Our relationship with animals in the “wild” is a topic that is part of public discourse almost every day, with issues including wolves crossing into our country, an eagle owl “terrorising” a community, fallow deer in the Amsterdamse Waterleidingduinen, urban foxes and the decline of certain meadow birds such as the black-tailed godwit. It is not always clear how and if we should intervene and what the specific course of action should be, as a variety of interests and values may be at play. The Council on Animal Affairs (RDA) believes it is important to act consistent, scientifically based and transparent when dealing with animals. The Council regards its starting point in this advisory report to be the existing laws and regulations, with the recognition of the intrinsic value of animals – as well as our resulting social responsibility for their welfare – as guiding principles.

In 2012, the RDA published an assessment framework to serve as a policy guide to shape the moral responsibility for the welfare of non-captive animals in practice: *Duty of Care, Naturally*. This advisory report reflects on whether and how that assessment framework may be applied to animals living in the wild. Given that both animal welfare policy and nature conservation policy have a very broad scope, the assessment framework and the corresponding flow chart were applied to three case studies: wolves, foxes and meadow birds. From these case studies the RDA concludes that:

- Although there may be opportunities for intervention (for example, by reducing animal numbers), this does not mean that it is necessary nor that other alternatives are unavailable. Alternatives must be seriously and thoroughly considered in all cases before any type of intervention occurs. In cases where human interests conflict with those of animals, the question whether intervention is required should precede the question of what should be done. For such cases, the assessment framework may be a tool to assist in an ethical consideration or assessment of the values and interests involved in the interventions available.
- The Nature Conservation Act (*Wet natuurbescherming*, Wnb) provides the legal framework within which interventions may take place and which resources may be used. The various steps of the assessment framework offer guidance and force parties to take stock of all relevant values and interests, with the added benefit of making those aspects explicit. As a result, the way in which values and interests are weighed becomes transparent.
- At present, assessments regarding animals in nature make little explicit mention of the welfare (including the health) of animals. The Council recommends that

- assessments and decisions on animals in nature should clearly outline how they take animal welfare into account, for which the assessment framework may provide guidance.
- European and Dutch nature conservation laws and regulations focus primarily on the conservation of species. As animal welfare and animal health also remain key in any assessment, knowledge of those aspects is crucial to the decision-making parties.
 - As a result of the decentralisation of nature conservation responsibilities, which have been largely shifted from central government to the provinces, differences may arise between provinces in their approaches to animal welfare and the conservation of species' populations. Although the results of the assessment in relation to wild animals may of course differ, the method of the assessment should be the same. This fact can be ensured through the use of the RDA assessment framework.
 - Wild animals have no conception of which province they inhabit. We, however, have a moral responsibility – free of any gradations – to take animals into consideration. The practical interpretation of this duty of care, however, varies per scenario. An explicit focus on the welfare of non-captive animals when formulating policy can contribute to reducing the number of differences in the regulations on animal and nature conservation policy.
 - Animal welfare policy for captive animals remains the responsibility and competence of the State. This responsibility rests with the provinces for non-captive animals (with the exception of animals in nature reserves that fall under the responsibility of the State, such as the large water areas). The Council notes that this distinction is not always clear and as such wishes to know how the welfare of non-captive animals in nature is safeguarded. When are both the State and the provinces satisfied?
 - Decisions on the welfare of individual animals may have an impact on the welfare of individuals in later generations and on populations of other species. That impact must be taken into consideration in every assessment regarding animal welfare. As such, the assessment framework is not only applied to the current animals, but also in view of future generations and other populations.
 - The survival of the species is also a factor that must be taken into account at the level of the relationship between the animal (sufficient species numbers for reproduction and social contact) and the ecosystem (equilibrium between all existing

species). Explicitly outlining the various factors within the assessment may result in more clarity as to when and why the interests of the individual (such as welfare) supersede those of the population (species/ecosystem), or vice versa. Applying the various steps and levels of the assessment framework allows us to ensure the concrete implementation of our statutory duty of care to animals in nature.

- The Council notes that the use of the term “intrinsic value” may lead to confusion, e.g. due to the differences between the intrinsic value of animals and the intrinsic value of nature. In addition, as intrinsic value has no measurable quantity, it cannot be used in the assessment of the interests of various species (e.g. fox versus black-tailed godwit) or of individuals and populations. The relationship between the intrinsic value of the animal and the intrinsic value of nature is not outlined further in the relevant legislation. This situation may result in tension and should receive attention in assessments for which the level of populations and ecosystems are important factors. The Council considers consistency and transparency to be key elements, also in the application of concepts and definitions, and would like to contribute to preventing any confusion or ambiguity. Regarding the intrinsic value of animals, the Council proposes to use its own definition: “*The term intrinsic value refers to the value inherent in an animal, irrespective of its utility.* Respecting this inherent value means factoring in the interests of animals in all decisions that affect them. Specifically, there is a moral obligation for human intervention not to cause structural or serious damage to the welfare, health or integrity of animals or their habitat”.
- Although the use of the assessment framework and the corresponding flow chart result in accuracy and diligence, proficient application requires practice. This method is well suited for diligent and measured decisions made in advance, while it is unsuitable for ad hoc decision-making.

1. Introduction

1.1 Motivation

The position of animals in the “wild” is a subject that has become part of almost daily public discourse, whether it be wolves roaming into our country from across the German border, an eagle owl flying at people’s heads, wild boar stuck in a canal or fallow deer in the Amsterdamse Waterleidingduinen.

While the animals are sometimes in trouble themselves, at other times they cause trouble to humans (opinions are often divided on that matter). It is not always clear how we are to deal with these animals and how we should intervene, if at all. Can we live with wolves close by and do we want to? When do animals cause such problems that we have to intervene and what should we do in such case? The key issue is when do we wait and see and when do we intervene?

The Council on Animal Affairs (RDA) is committed to ensuring a relationship with animals which is consistent and transparent, and supported by scientific evidence. The fundamental recognition of the intrinsic value of animals, the acknowledgement of animals’ integrity, applies to all captive and non-captive animals¹. The same principle applies to the resulting moral responsibility. Our moral responsibility for the welfare of animals transcends context (i.e. it is not dependent on the situation) and applies to both captive and non-captive or semi-captive animals. Principally, this moral responsibility is situated separately from the issue of whether – in light of other values and practical options – we are able to interpret and implement it through our duty of care (RDA, 2012).

In the advisory report *Duty of Care, Naturally* (RDA, 2012), the RDA developed an assessment framework to provide a concrete practical interpretation of our moral responsibility regarding the welfare of non-captive animals. The assessment framework from *Duty of Care, Naturally* is a policy tool that allows parties to make consistent, substantiated and transparent assessments in the field of welfare issues regarding non-captive animals. With regard to the decentralisation of nature conservation policy to the provinces, the emphasis of European and national laws and regulations has been on the conservation of species. Nevertheless, as animal welfare and health remain key factors to be considered, knowledge at a decentralised level is crucial². Given that the scope of animal welfare policy and nature conservation policy (including animals) is very broad, this advisory report applies the RDA assessment framework to a number of animal species in

¹ The Animals Act, Section 1.3, refers to intrinsic value as the recognition of animals’ integrity “as sentient beings” (also referred to as such outside of the legislation).

² Primarily regarding the issue of the manner of intervention; see Wnb, Section 3.24.

practice. In addition, the RDA wishes to demonstrate which lines of thought and reasoning are contained within the assessment framework. With this the RDA seeks to provide government policy with a tool which can be applied to issues regarding animals in nature that potentially require some form of intervention. By following a process of reasoning in advance, ad hoc responses to acute situations can be prevented and uniformity between the provinces can be promoted.

1.2 Background

1.2.1 Socio-ethical debate

There is very little explicit focus on the position of animals – individually or collectively – in the National Nature Vision of 2014, “The Natural Way Forward” (“Natuurlijk Verder”), published by the Ministry of Economic Affairs. Nevertheless, nature conservation policy will always have an impact on animal policy (government policy in the field of animal welfare and animal health), whether directly where wild animals are concerned or indirectly where nature affects other domains such as agriculture, fisheries and public health.

Interests

Occasionally, the interests of non-captive animals collide with those of humans. Conversely, animals render both known and unknown services to us within their ecosystem (ecosystem services), which make them valuable to agriculture, the economy and public health. In addition, people enjoy seeing animals in nature and enjoy that relationship in a recreational way or as a hobby (e.g. bird watching). A duty of care for wild animals may mean putting animals which are suffering out of their misery or, at the very least, ensuring that they do not suffer needlessly. Such cases might include beached whales or starving red deer, Konik horses and Heck cattle in the Oostvaardersplassen Nature Reserve.

In the field of animal health and public health, wild animals can cause damage to livestock and poultry as carriers of diseases, such as classical swine fever and bird flu. Under certain circumstances, animal disease prevention may be the decisive factor in policy decisions, in part pursuant to international and European obligations (also see Section 1.2.2.). Badgers, for example, are subject to stringent protection rules both in the Netherlands and in the United Kingdom. However, in the United Kingdom, badgers are culled to reduce the spread of tuberculosis to cattle³.

Animals such as geese, deer, foxes and mice can all cause damage to agricultural enterprises. Musk rats can cause damage to dykes, geese at Schiphol Airport may pose a

³ The role of the badger in this regard, the effectiveness of the culling of badgers and the methods used are controversial. Opinions on this subject are strongly divided between government, scientists, farmers and nature conservation organisations.

threat to air traffic safety and fallow deer in the Amsterdamse Waterleidingduinen can cause problems for road traffic. Within those scenarios, the interests of humans may collide with animal welfare considerations, including animal health.

We seem to be fairly inconsistent in our approach to situations where our interests conflict with those of non-captive animals. First, we deal with non-captive animals differently than we do with captive animals. A field mouse causing damage, for example, is approached and treated in a different manner than a pet mouse or a laboratory animal. There also seems to be a distinction between animals with abundant populations which we consider to be a nuisance and which may cause damage (such as musk rats), and rarer animals which are under threat (e.g. the reintroduction of beavers). The spontaneous settlement of white-tailed eagles, ospreys and great egret on Dutch soil is welcomed, whereas the occurrence of wild boar and red deer occasionally leads to debate. In part, economic value and emotional value also inform what our attitude as a society is towards a particular animal. The underlying reasons have also been developed in law (see Section 1.2.2.), with policy primarily dealing with the conservation of species.

The interests of animals may also clash with one another: between certain individuals, but also between different species and populations. Individual otters which have been reintroduced and which we protect are far more vulnerable as a population if the degree of isolation they live in makes inbreeding unavoidable and to be decimated by traffic casualties⁴. By contrast, the robustness of the population for other animals may benefit from natural selection, whereby the weaker animals are selected against.

For example, if meadow birds increasingly come under threat due to habitat degradation, territory loss, and modern mechanical fertilisation and harvesting machinery – with numbers reduced even further due to native predators such as foxes, crows, buzzards and herons – the necessity arises to control such predators. This situation raises questions about how we should deal with nature and whether a certain species has more right to exist than another species. In order to prevent a negative impact on animals and their habitats, we should ask the question whether measures free from such a negative impact have (or should be given) priority over others (for example, to prevent habitat loss, degradation and machining of the habitat is prevented at the source).

Alien animals that have been introduced by man either intentionally or unwittingly can have a significant adverse impact on other wildlife and may harm the ecology. Invasive species (species that are not indigenous to the Netherlands) and escaped or released pets

⁴ Currently, the number of otters in the Netherlands is on the rise, although their habitat is not growing in size.

often constitute as unwanted species in the wild. Currently, there is a public debate about the need to control these animals (such as cats, ferrets, minks, raccoons, tame crows, parakeets, Egyptian geese)⁵.

There are also ongoing discussions about which means and methods would be least damaging from the perspective of animal welfare once it has been decided to proceed to intervene. Some examples include the gassing of wild geese and the drowning of muskrats in underwater traps, as well as organised hunts or damage control operations which disrupt the social structure or family groups of the animals (e.g. damage control of geese). In addition, there is the practical issue of whether the removal of the animals from the wild (and the corresponding method) has the desired result. In many regular cases, for example, the shooting of foxes will not result in a decrease of population density (given that population size is primarily regulated by territorial behaviour). The gassing of large groups of geese will not prevent the animals from settling in the vicinity of airports if the environment is suitable, or is made suitable, for that purpose. Natural processes are dynamic in essence and difficult to alter through policies and regulations. According to the Nature Conservation Act (see following section), in the event of experienced damage or nuisance, parties must first look into alternatives which are least damaging to the species concerned in order to correct damage and nuisance. In practice, however, the step of seeking out alternative methods to prevent or limit damage or nuisance is not always taken.

In addition to the conflicting interests between animals and humans, and among animals themselves, the interests of animals may also clash with those of nature (or our vision of nature) and ecosystems. Leaving nature to its own devices and limiting human intervention may clash with animal welfare principles, as demonstrated by debates on feeding deer during the winter months or on inaction in the face of preventing an invasion of exotic species. The notion of “true” and “pure” nature being a natural world that is able to maintain itself free of human intervention is difficult to achieve in our densely populated nation with significant impact from human actions. Moreover, attempts to create such an “ideal” situation often do not result in the desired ecosystem.

Values

Values also play a key role in addition to interests. These values are fundamental, common notions shared by people on what they consider to be important issues. They are ideals

⁵ A number of invasive alien species are on the Union list. Listed species may not be sold and EU Member States are required to detect and eradicate any populations present in the wild. If this is not possible, the population must be managed to prevent its spread and damage as much as possible. New species were added to the list in August 2017 (NVWA website, 2017).

and convictions regarding the goal that should be achieved. Section 1.3 will focus on this issue in greater detail. Where values are intrinsic and valuable in and of themselves, interests are instrumental in essence and are linked to a purpose or goal. Nevertheless, various interests may be based on the same values.

Values and interests can be weighed differently, which makes taking action in acute situations difficult; for example, in situations where the interests of animals in the wild conflict with those of humans or where the mutual interests of animals clash with one another or conflict with those of nature. The question of whether we should intervene when faced with wolves crossing into our country, the disappearance of the black-tailed godwit or field mice damaging crops has no template answer that takes into account the various interests and values.

The European and national legal framework does include existing principles, options and requirements for human intervention. These frameworks indicate which opportunities for intervention there are in a given situation. The following section focuses on that subject in more detail. Although laws and regulations can be regarded as a crystallisation of morals, they are also products of cultural and social influences, values and debates and – as such – are subject to change. An ethical assessment and consideration of what is or may be desired, which takes into account all the various interests and values, is therefore required.

1.2.2 Laws and regulations

The protection of wild animals is ensured by the Nature Conservation Act, which came into force on 1 January 2017. The Nature Conservation Act of 2017 has replaced both the Nature Conservation Act of 1998 and the Flora and Fauna Act, and to a significant extent constitutes the implementation of the Birds Directive and the Habitats Directive. Both directives commit Member States to the protection and conservation of animal species and habitats, and focus on ensuring the long-term conservation of biodiversity, habitats, and wild animal and plant life. The implementation of these European frameworks by way of the Nature Conservation Act is effected by the protection of Natura 2000 areas and by a system that is aimed at ensuring the conservation of certain animal and plant species. Although the species protection system outlined in the Nature Conservation Act goes beyond the requirements of European law, it provides less extensive protection than the Flora and Fauna Act. The Nature Conservation Act distinguishes between three categories of species, to wit 1) birds, 2) species that must be protected pursuant to the Habitats Directive and the Bonn and Bern Conventions and 3) other species listed in the Annex to the Act. All other species are only protected under the duty of care⁶. As such, not every

⁶ Freriks, 2016.

species of animal has the same protection, with some being more heavily protected than others. Species protected by European law may only be subjected to intervention in the event of a threat to compelling societal interests, such as public health or the safety of air traffic.

Exceptions to these types of prohibitions, by way of exemption or derogation, must meet three basic requirements. First and foremost, 1) it must be established that no other satisfactory solution other than the intended infringement of the prohibitions exists. In addition, 2) the conservation status of a species may not deteriorate⁷. Finally, 3) an exception may only be permitted based upon one of the exhaustive grounds set out, which are derived directly from the European directives. As regards other species, the law provides for extensive possibilities to grant permission for infringements of the prohibitions⁸. Grounds for exemption or dispensation may include acts within the context of urban and spatial planning, damage/nuisance, unnecessary suffering, population management or the “public interest”. Other species have seen their protection restricted when compared to the Flora and Fauna Act. One such species is the badger, which had been subject to equally stringent protection under the Flora and Fauna Act as species that are protected under the Habitats Directive. Under the Nature Conservation Act, fewer actions are prohibited (there is, for example, no prohibition against disruption) and more may justify an infringement.

The responsibility for and control of the implementation of nature conservation policy and the Nature Conservation Act rests chiefly with the provinces. A limited number of cases still come under the competence of the Minister of Economic Affairs (such as the final responsibility for policy on the large water bodies, and the authority regarding certain permits and exemptions). Each provincial authority is able to make its own policy on how the applicable rules and regulations are to be implemented in the province. In principle, the responsibility for animal welfare and animal health still rests with the national government⁹.

The legal grounds for intervention with regard to certain animal species depends on the system of protection governing the species and the grounds which can be put forward for

⁷ Nature Conservation Act, Section 3.3, Paragraph 4, provisions for Birds Directive species. For species of the Habitats Directive, the stipulation is as follows: “it shall not adversely affect the pursuit of ensuring the favourable conservation status of the populations of the relevant species in their natural dispersal area” (Section 3.8, Paragraph 5).

⁸ Freriks, 2016.

⁹ Animal welfare policy is ordinarily part of the management policy that the National Forest Service in the Netherlands (Staatsbosbeheer) carries out on its estate. The only area to be governed by a special authority for the Minister for Agriculture was the Oostvaardersplassen, which has since been transferred to the province of Flevoland. In general, animal welfare policy for captive animals remains the responsibility and competence of the national government; in this case, the Ministry of Economic Affairs.

such an intervention. Furthermore, the Nature Conservation Act – pursuant to the European directives – provides rules for the resources and methods that may be used for intervention. With regard to the prevention of damage/nuisance, Section 3.25 of the Act stipulates that *"only such resources are provided for the control of birds and animals that prevent adverse effects on the welfare of birds and animals, or otherwise limit such effects as much as possible, with the killing of animals to be avoided as much as possible"*. As such, in order to prevent or limit adverse effects on animals as much as possible, parties must first consider what alternatives there are to prevent the alleged nuisances¹⁰. If there are none, the parties may move on to further intervention. Only if no other suitable and effective measures are available to reduce animal numbers may the province choose to cull wild animals.

From a legal point of view, not just any method or means may be used. Under the Nature Conservation Act, implementation decisions are issued which outline the methods and means that are permitted for the capture or killing of animals. These means have different impacts on the suffering and the welfare of animals and, as such, are closely monitored (for example, by various social groups; see previous section). There is also an ongoing debate on which means and methods are the least damaging.

Where the Animals Act refers to the intrinsic value of animals, the new Nature Conservation Act explicitly includes reference to the intrinsic value of nature (the value independent of human practicality or use): "This Act is aimed at: a. the protection and development of nature, in part due to its intrinsic value, and the conservation and restoration of biological diversity" (Nature Conservation Act, Section 1.10, Paragraph 1)¹¹. The relationship between the intrinsic value of animals and the intrinsic value of nature is not further clarified.

1.3 Scope

The Council is committed to consistency, transparency and scientific substantiation within a conscious assessment process of potentially conflicting values and interests, and it has asked itself to what extent its assessment framework from "Duty of Care, Naturally" may be of assistance. The Council acted on its own initiative in order to present a framework as an example and a tool for authorities and managers tasked with making decisions about wild animals; it is not intended as a replacement of the existing statutory frameworks for public authorities. In order to study the efficacy of its own assessment framework, the

¹⁰ Nature Conservation Act, Section 3.12, Paragraph 4: "Appropriate and effective measures for the prevention and control of damage caused by animals living in the wild shall be part of the fauna management plan".

¹¹ The intrinsic value of nature or of animals is not explicitly mentioned in the European Birds and Habitats Directives.

Council uses this advisory report to present whether the assessment framework from Duty of Care, Naturally (RDA, 2012) can be applied in practice on the basis of a number of case studies.

The following key principles apply to this advisory report:

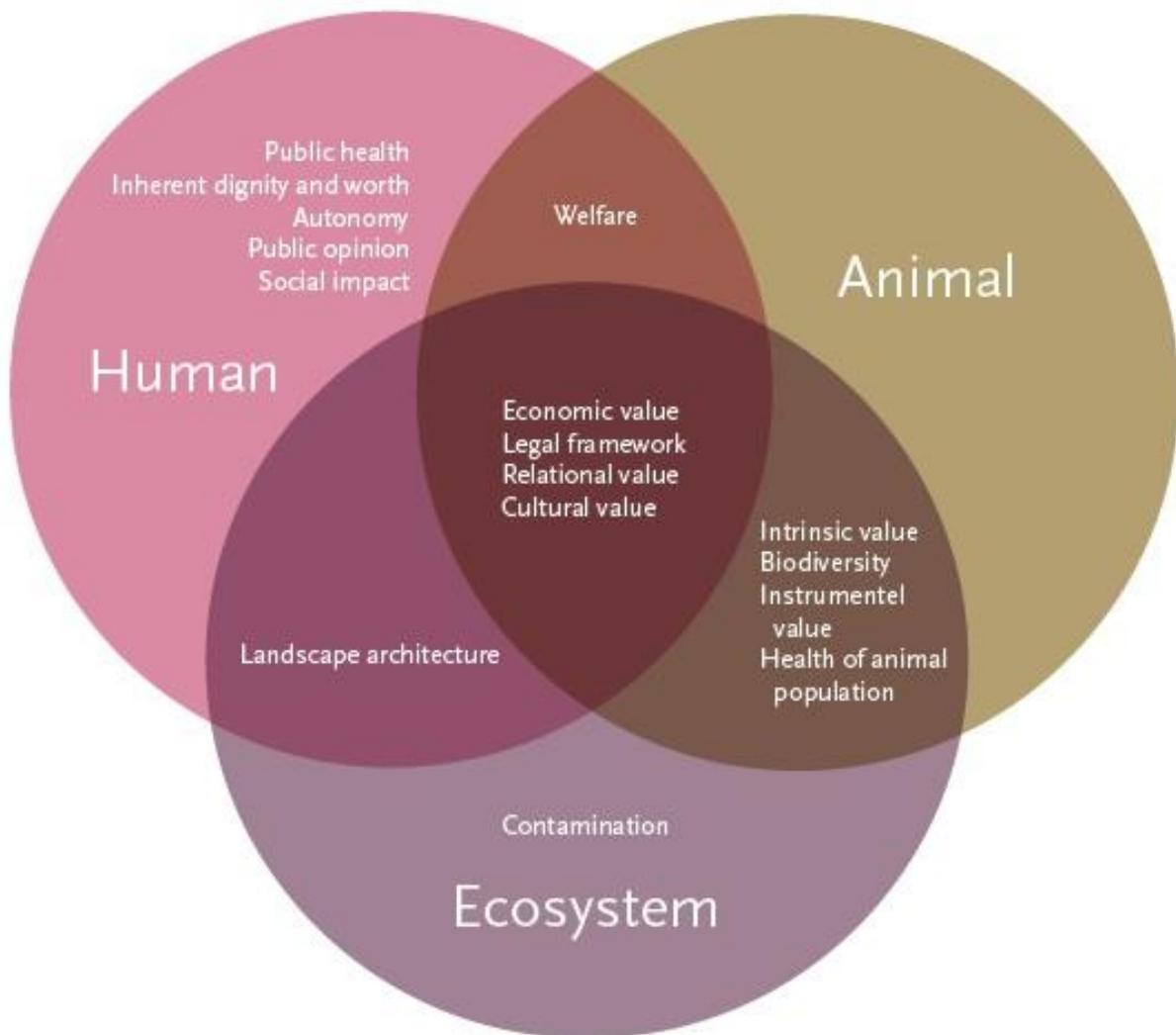
- the need for a transparent and consistent decision-making process by all relevant authorities;
- the concepts and frameworks as developed in Duty of Care, Naturally;
- the current applicable laws and regulations.

The advisory report is limited to case studies on wolves, foxes and meadow birds, through which an attempt is made to demonstrate the lines of thought of the assessment framework and the flow chart. This approach also demonstrates that the process may lead to a variety of outcomes, depending on the various choices which can be made.

By discussing the case studies, the Council wishes to provide a guideline for the assessment of all crucial values and key interests, in order to enable policymakers, public officials and estate management organisations to arrive at an ethical and substantiated decision regarding intervention. The assessment framework/flow chart provides a structure for all such considerations. It does not resolve substantive debates, but rather uses the case studies to indicate inconsistencies in policy by demonstrating that taking certain positions results in certain consequences. The key issue is not only to decide whether intervention is justified, but what form that intervention should take.

Values

The case studies use values/interests from the One Health framework (RDA, 2015): Public health, Inherent dignity and worth, Autonomy, Public opinion, Cultural value, Social impact, Individual health/Health of animal population, Welfare (individual, group, species), Economic value (also: damage), Legal framework, Relational value, Intrinsic value, Instrumental value, Biodiversity, Contamination (environment), Landscape architecture.



1.4 Central question

Both nature conservation policy and animal welfare policy have a very broad scope and touch on various policy contexts. The RDA strives to provide a consistent and transparent operating framework for the way in which we, as humans, deal with non-captive animals.

The central research question of this advisory report is:

Can the assessment framework that has been used in Duty of Care, Naturally be applied in practice?

The corresponding sub-questions are:

- What are the operating frameworks that already exist on basis of the current policy principles?
- Are those frameworks consistent or, if not, can they still be used parallel to, or in combination with one another?

- What do the implicit and explicit choices contained within currently often decentralised policy decisions entail for such an assessment framework?
- How does the use of different key principles, definitions and visions (e.g. of “nature”, “ecosystems”, “intrinsic value”, the welfare of the individual vs. the group/population) lead to different outcomes in the application of the flow chart from Duty of Care, Naturally?

An analysis of these questions will help estate managers and public authorities to answer the question when and under what circumstances (key principles) they may intervene as regards the size and location of animal populations and animals which may cause economic and/or other damage or nuisance. Before parties know whether they should and could intervene, they must go through a number of analysis steps that elicit questions on the necessity of intervention, map out values, interests and alternatives, and lay out the legislative frameworks.

2. Application of the assessment framework

2.1 Assessment framework and flow chart

2.1.1 Explanation

Decisions in the field of animal welfare not only depend on objective biological welfare assessments, but must also take into account ethical dimensions and social views or perspectives. As core moral assumptions underlie animal-related problems, those assumptions must be analysed first (RDA, 2010).

These decisions should be transparent and public, and ought to be based on the most recent scientific knowledge available, as well as on widely shared public opinions and moral convictions. Public opinion would, ideally, be derived from a fully ethical assessment: a reflection process in which intuitive judgement, knowledge and moral principles are taken into account. The process of an ethical decision is very different from a scientific evaluation based on factual truths.

Various frameworks have been developed to organise and analyse such (moral) decisions (see, for example, Beekman et al., 2006; Mepham et al., 2006; RDA, 2010). The assessment framework can make policy and political decisions more clear, increasing the transparency of the underlying considerations. In addition, it may assist policymakers to test their own decision-making on consistency. In addition to facts and scientific evidence, emotions and moral values are a key part of this process. For that reason, policymakers must be explicit about the moral assumptions that they make and the value that they accord to both the management objectives and the potential impact on the animals.

Assessment framework

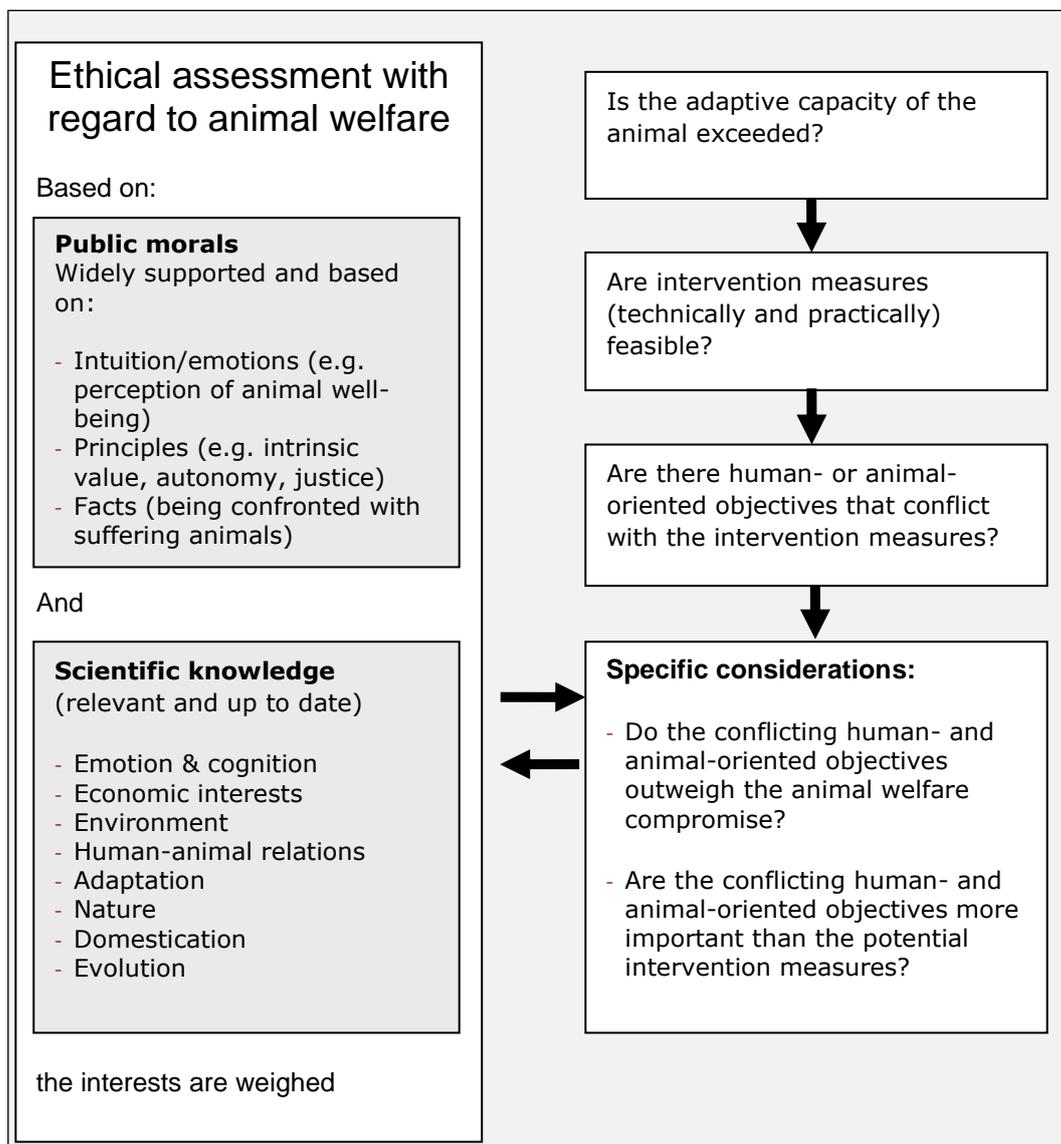
An assessment framework is meant as a tool to help identify what the actual underlying issues at the crux of a debate or a decision actually are, and to assist policymakers in taking a full inventory of every aspect at play in a given problem or issue. Policymakers formulate their own objectives and assumptions as well as those of others, and identify potential or actual dilemmas that result from it. The conclusion and decision will always be based on the ascribed value of the various factors, which will virtually never resemble the absolute truth. In order to be credible and transparent, such considerations and decisions will at least have to be consistent with regard to positions of principle and presuppositions.

Flow chart

A flow chart is meant to provide structure to a practical decision on whether or not an intervention, in this present case, can and should take place. This decision may be related

to an animal welfare issue or a variety of wildlife management issues. These flow charts should help estate managers to analyse current problems and make their decisions more transparent and comprehensible.

The assessment framework and flow chart from Duty of Care, Naturally are displayed in the figures below. The ethical assessment can be conducted at the beginning of an issue on an abstract level; moral considerations will take place first, only then followed by technical considerations. Once a practical decision has emerged from the flow chart, a specific ethical assessment can subsequently be made.

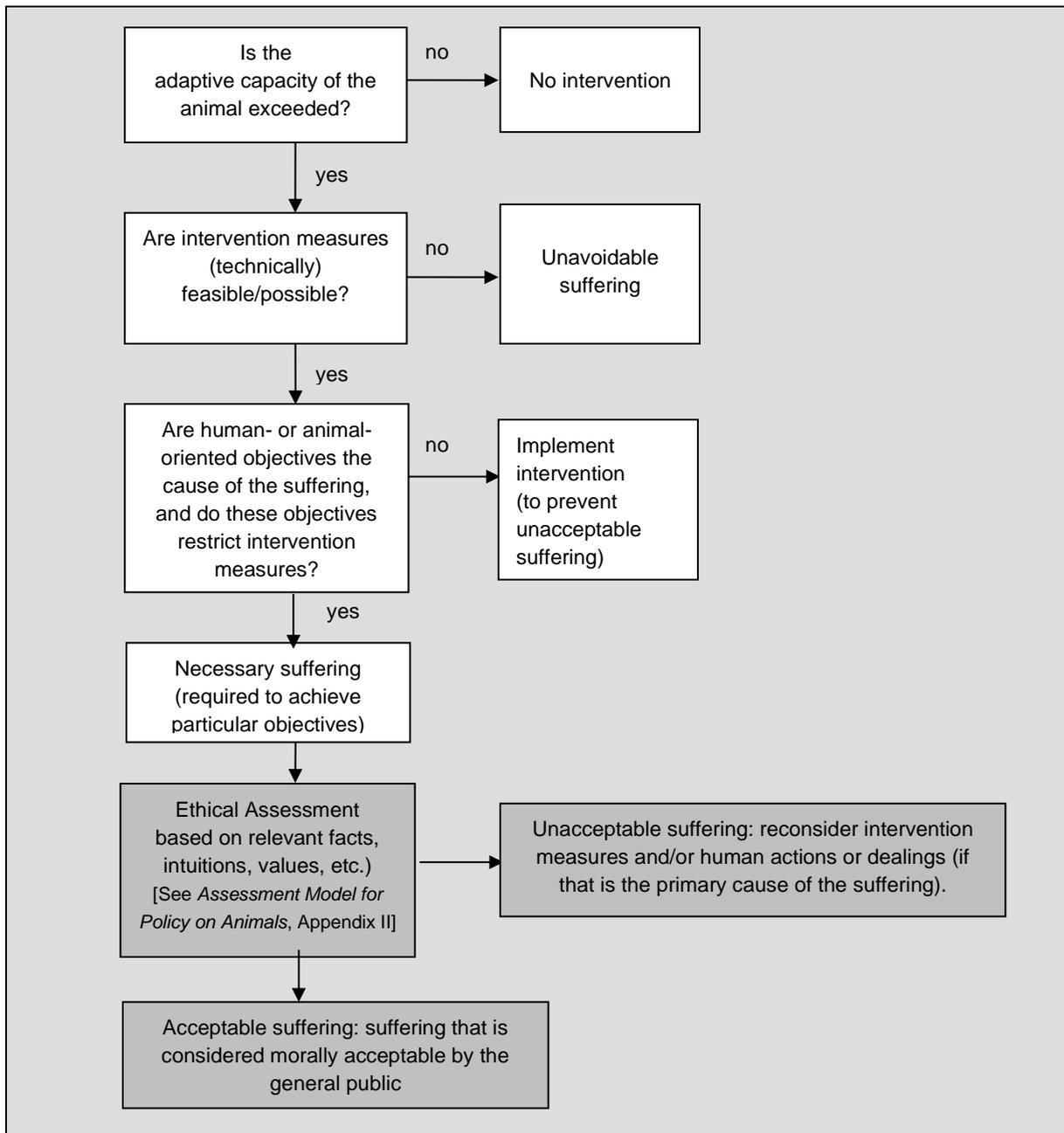


The left-hand column of the assessment framework focuses on the consideration of values, based on public moral and scientific knowledge. The right-hand column addresses the underlying fundamental moral questions that are associated with a specific issue. The

purpose of the right-hand column is to make those moral questions explicit and situate the dilemmas which, despite diligent consideration, will continue to exist.

The right-hand column in the advisory report *Duty of Care, Naturally*, focuses specifically on the adaptive capacity of individual animals. However, as wildlife issues may easily relate to a population or a species as well, the fundamental moral questions and dilemmas are inevitable different; for example, “Can the extinction of a species of animal be justified?” or “Is the species of value?” Those specific decisions do not deal with individual welfare but rather with the survival of the population or the entire species.

The use of the assessment framework clarifies which potential dilemmas cannot be resolved and which potentially shared presuppositions and values are at play. It may also make clear which aspects or interests are ascribed greater value than others, and why the decision-maker should take which positions for that reason.



The assessments are carried out successively at the technical level, at the management level and at the societal level. It goes without saying that these assessments should take place in the public eye, and preferably ex ante.

2.1.2 Previous applications

Previous versions of the assessment framework have been applied successfully in specific case studies relating to wild animals. The flow chart was not applied in every instance.

Oostvaardersplassen case study

The first case study that used the assessment framework/flow chart concerned the ethical considerations surrounding large herbivores in the Oostvaardersplassen Nature Reserve

(ICMO2, 2010). "This exercise demonstrated that the assessment framework is indeed suitable for the identification and analysis of moral dilemmas within complex issues. The model allows the key principles and objectives relevant to policy to be clarified" (RVZ, 2012).

The essay collection "De mens centraal" ("The human measure"; RVZ, 2012) offered a discussion of the assessment framework and studied whether it could be used to take account of animal welfare and environmental aspects within public health policy.

"The application of an ethical assessment model will not immediately result in a resolution of complex dilemmas. However, it may offer clear added value to the Government, given that it is able to make the underlying moral frameworks of policy more transparent. This process helps to justify and account for policy to Dutch citizens." In addition, the application of the assessment model may offer added value in the identification, recognition and acceptance of positions, expose key principles and the resulting moral dilemmas, and actively table and discuss fundamental questions and issues.

Flow chart for Scottish case studies

The Scottish Natural Heritage organisation drew up a report in which it outlined how the assessment framework and flow chart were used to approach two cases where animal welfare principles were applied at the level of a population of wild animals. The first case concerned the feeding of the deer in the winter, while the second case dealt with the desirability of exterminating hedgehogs on certain islands of the Outer Hebrides (Uists). Although no conclusion is provided on what the outcome of these issues should be, the report does outline the various steps and the questions that need to be answered.

2.2 Application of flow chart

2.2.1 Preceding questions and steps

The flow chart associated with the assessment framework from Duty of Care, Naturally sets out with the question “Is the adaptive capacity of the animal exceeded?” (see Section 2.1). This question can be used in cases where the non-captive animal is experiencing a potential welfare compromise which can lead to suffering, as is the case with the large herbivores in the Oostvaardersplassen Nature Reserves that have too little food.

In many cases of animals “roaming” in the wild, this question is usually not the first that would be asked. Many case studies arise from damage or nuisance reportedly caused by animals. In the wildlife management plans of wildlife or fauna management units, animal welfare and damage to flora and fauna are designated under “damage”, for example, shootings can take place in that context (after or during the implementation of preventive measures; the Nature Conservation Act obliges the consideration of alternatives). Although a welfare compromise of wild animals in itself does not always necessitate such a decision, the case of the Oostvaardersplassen Nature Reserve is a special exception.

Often, there is initially no question of welfare compromise or suffering of the animal, such as when a wolf crosses the border into our country or when foxes migrate to the city. In addition, these situations do not deal exclusively with individual animals but also relate to the extinction and survival of populations and species (such as the European hamster or various species of meadow bird). It is then that we should ask ourselves the question whether action must be taken or whether we must intervene: “Is intervention necessary?” or “Is intervention necessary to achieve human- or animal-oriented objectives?”

The first action in such situations is to establish whether there even is a problem, which may be either an ongoing problem (reactive) or a future problem (proactive/preventive). Although the law contains a variety of provisions on when parties are permitted to intervene, this fact does not always mean that intervention is necessary. There may be other possibilities in addition to the normal ways of dealing with situations or there may already be ample statutory measures available which are not yet being applied. Perhaps the cause or origin of the situation (and therefore a long-term and sustainable solution) may lie elsewhere. A case study is always a complex and specific situation, which must be analysed in that way. The following steps may offer guidance to do so.

Step 1) Is it a situation in which the interests of animals threaten to conflict with our own or other interests? *In order to find out, parties must take an inventory of the available knowledge and the prevalent views on the dilemma in hand. This inventory also*

includes relevant information from nature conservation legislation, such as wildlife policy plans, fauna management plans, modes of reasoning and escalation models.

Step 2) What are the various interests and values at play and how should they be weighed? *This step involves mapping the various interests and values involved (see Section 1.3 and Annex). All the different values and interests must be weighed against one another. In addition, the interests and values contained in the nature conservation legislation must be taken into account, e.g. the points referred to in the Habitats and Birds Directives. The assessment may also take account of our responsibility regarding the situation; the more the interests of the animal are threatened due to our actions, or the more this situation could have been predicted or prevented, the greater our responsibility may be.*

The weighing of values and interests, and the decision whether to carry out which policy measures, is a decision for policymakers. Going through each of these values and interests step by step enables parties to use a transparent assessment and deliberation to arrive at a balanced answer, substantiated by corresponding argumentation. These first questions and the assessment of the interests and values lead to a decision on whether or not to intervene. This decision is the first ethical assessment that is made, after which the question of whether or not to intervene is concluded and the issue of how to intervene begins. Once the relevant parties have decided on intervention, the third question comes into play.

Step 3) What are the possible interventions? *This step involves making an overview of all the possible interventions.*

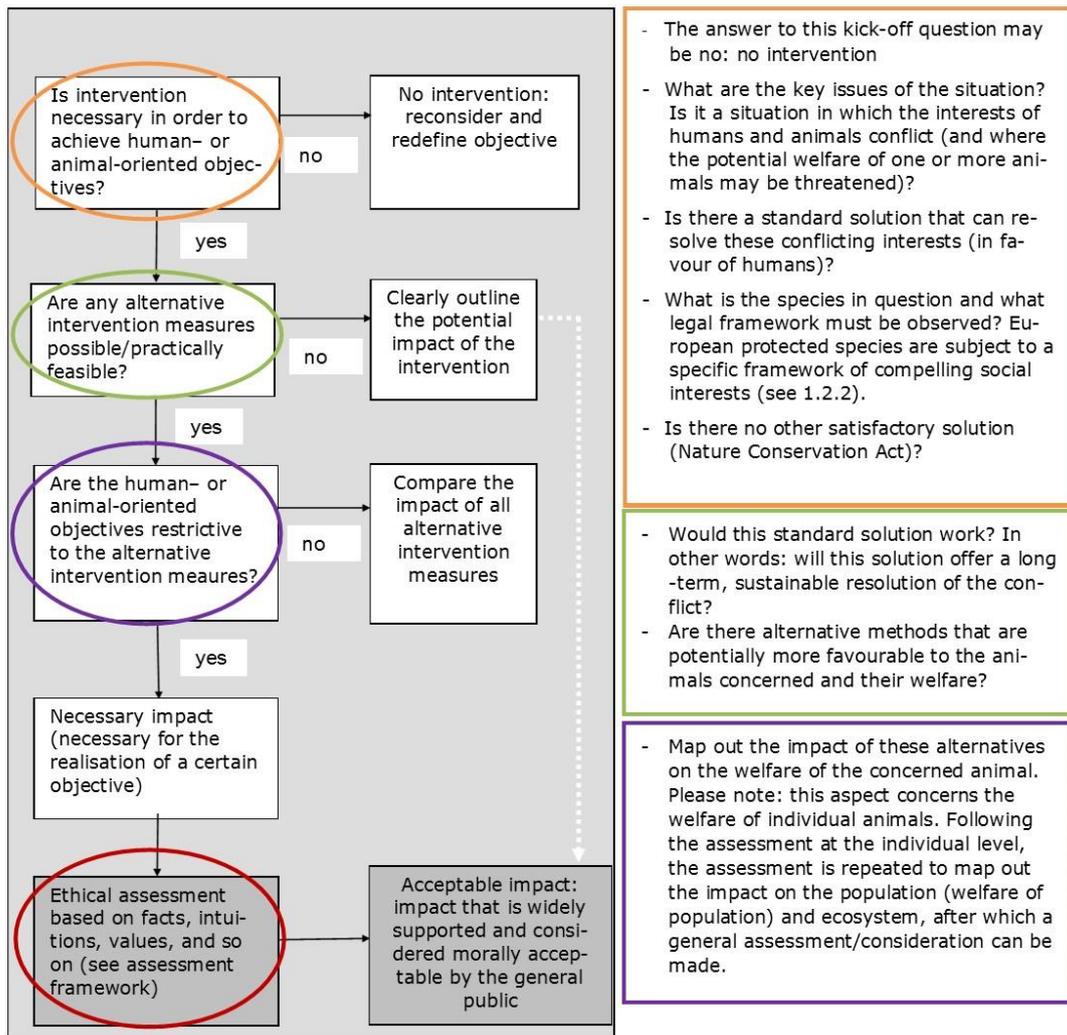
Interventions can relate to a broad variety of measures, such as helping animals, relocating them, chasing them away, killing them or having them sterilised, to name a few. In order to determine the possibilities, parties must defer to the principles of the Nature Conservation Act; for example, to establish that no other satisfactory solution exists. Intervention also entails the means and methods that can be used to that purpose. The question of the means and methods applicable is independent of the types of interventions. Although the Nature Conservation Act provides for a number of means and methods that are permissible, not all means and methods may be used in a given case. The law provisions conditions which means and methods may be used for which species. To an extent, wildlife management plans, guidelines and escalation models also indicate which obligatory preventive and alternative measures can or must be taken for specific species (the Nature Conservation Act only prescribes the obligation of considering the relevant alternatives).

2.2.2 Application of the flow chart

In order to carry out a diligent ethical consideration or assessment of an available intervention, parties may go through the flow chart below¹² step by step and answer a number of key questions relevant to each case. These questions help to map out the important issues of the situation, the presence of conflicting interests and the ways in which to deal with conflicting interests. Using the flow chart, parties are able to determine whether intervention should take place; in addition, it can serve to determine what type of intervention is most suitable. The flow chart has been applied to several case studies in the following chapters.

This flow chart first surveys the assessment of the welfare impact for the individual animals concerned step by step. It should be noted that the impact on the welfare of an individual animal or individual animals may differ from the impact on a population. Following an assessment on the level of the individual, the flow chart is applied again to map out the impact on the population (welfare of the population) and ecosystem, after which a complete assessment can be made. The flow chart and the assessment framework are also included in the annexes.

¹² The current flow chart is based on the existing flow chart from Duty of Care, Naturally and should be used when the impact of a potential intervention is in question for any reason. As a result of the intervention, the welfare of the animal may be raised at a later point, but only as a result of the intervention. If an intervention has been decided upon, the kick-off question to be used is: "Does intervention impair the adaptive capacity of the animal(s)?", such as in the case of the Outer Hebrides in Scotland where hedgehogs threatened indigenous wildlife (Ohi & Putnam, 2013).



Ethical assessment: Weighing the various interests and values (see also Section 2.1 and annex)

In order to conduct an ethical assessment, the party in question must map out all the relevant facts, principles, intuitions, and human values and interests of the case (including those of nature conservation legislation). These facts, principles, intuitions, interests and values should then be weighed against the welfare impact of the intervention for the animals concerned.

In this ethical assessment, parties may ask themselves what their responsibility is in the present case. Possible considerations may include whether they themselves are to a greater or lesser extent to blame for the resulting situation, or whether the case concerns more non-captive animals (such as sparrow hawks, pike and seals) or more semi-captive animals (such as wild boar released by humans, stray cats or large herbivores in the Oostvaardersplassen Nature Reserve). The parties may also ask: are we able to act in line with our responsibility and our legal obligations stemming from nature conservation action? Although the duty of care to animals may remain the same, the actions may vary. If there are no restriction of intervention options, the legal framework may take precedence, for example. By contrast, if intervention options are restricted, parties must be able to make a decision based on certain principles and assumptions.

As such, a starting point may be prioritise "problems" that have been caused by humans. Another starting point may be to prioritise solutions that deliver the highest gains for humans.

2.2.3 Focus areas

There are a number of focus areas when applying the flow chart:

- There are differences between the welfare of individual animals and the welfare of a population; these differences may conflict with one another. The flow chart therefore must also be applied to the population level.
- The weighing of conflicting interests may occur on multiple occasions. The consideration of the various interests is not contained in the flow chart per se, but rather in the ethical assessment (bottom). The various interests and factors are weighed implicitly when mapping the potential alternatives (in legal terms, this point concerns the consideration of less damaging alternatives that allow the same objective to be achieved; see the alternatives test of the Nature Conservation Act).
- As every situation requires a tailored approach, going through the steps and using the assessment framework and flow chart forces parties to take a diligent and thorough inventory of all interests and values involved and incorporate them in a decision. The flow chart does not indicate when which specific interest or value takes precedence; this aspect is precisely the assessment and decision which the authority (province/ministry), policymaker, official or estate management organisation must make themselves (within the framework of the law). The questions in the flow chart (for example, are alternative intervention measures technically/practically feasible) always refer back to the information of the ethical assessment: which interests and values are important, what scientific knowledge/public social morals are involved. This information can be used to answer the yes/no questions.
- The simple fact of dealing with risk and uncertainties in the face of little information available is always the backdrop to assessing whether there is sufficient information (and information of sufficient quality¹³) to answer a question, including the question how great the responsibility of us as the parties involved in the case is.
- Species protected by European legislation are subject to a specific framework of compelling social interests (see 1.2.2), which is not the same as the assessment of interests outlined in the flow chart. Although the flow chart can still be applied with due consideration of the law, the outcome may be different.

¹³ For example, scientific evidence in the field of wildlife management may be limited compared to other studies and may depend in a number of cases on the personal preference of the researcher. Awareness of these aspects is vital.

3. Reflection on the application of the assessment framework and flow chart

The annexes include three case studies containing the results of the application of the assessment framework in relation to foxes, wolves and meadow birds. The results are intended to demonstrate how the assessment framework and flow chart could be used and how the various steps follow one another up. In this matter, the Council is not concerned with the answer to the initial question and the final decision; instead, it is focused on demonstrating how the assessment framework and flow chart can be tools for assessing potentially conflicting values and interests (of which transparency, consistency and scientific substantiation are the guiding principles). The case studies are by no means presented as absolute truths and should not be used for decision-making or the substantiation of positions; as such, they do not represent the opinion or views of the Council. Rather, they are examples of potential results and are exemplary of the way in which the assessment framework and flow chart could be applied. The following chapter limits itself to a reflection on the application of the assessment framework and flow chart in the case studies.

3.1 Urban foxes

The initial question in this case study is: should we intervene regarding foxes who live cities (and cause nuisance)?

Various facts and intuitions come to light when applying the assessment framework and flow chart. The problems caused by urban foxes may vary on a case-by-case basis. Examining the various interests and values brings to light all the different aspects that must be taken into account in a decision on how to deal with urban foxes. For example, although public health risks are low at present, this situation may change in time along with the reasons to intervene in due course (an outbreak of rabies can develop rapidly).

As the way in which the various interests and values are weighed is at the discretion of the authorities and depends on policy, the process will vary each time. For example, specific cities may experience major inconvenience (waste/pets), which for the Provincial Council may constitute a reason to designate the fox as a nuisance species in the provincial regulation. In other cases, the nuisance caused can be so minimal that sufficient alternatives are still available to prevent further nuisance or to adapt human behaviour. In addition, there may be local/regional differences in attitudes towards foxes and the nuisance caused (or even their welfare). These differences will manifest themselves in public morality. There may also be differences between the nuisance caused by individual

foxes or by a fox population. The assessment framework and flow chart offer a concrete tool for parties to map out all the knowledge, moral views, interests and values per situation and to assess the alternatives to interventions. As the consideration of the various interests and values is at the discretion of the authorities and depends on policy, the decision/assessment will vary each time. Applying the assessment framework and flow chart ensures that the decision or assessment is carried out in the same way each time and provides insight into why certain choices are made.

3.2 Wolves crossing the border

The initial question in this case study is: should we intervene when a wolf is sighted in the Netherlands?

Just as in the case of urban foxes, various facts and intuitions come to light when applying the assessment framework and flow chart. A distinction is made between an ordinary wolf and a "nuisance wolf"¹⁴; as long as wolves do not become a "nuisance", the Operational Scenario for Wolves (Operationeel Draaiboek Wolf) stipulates that parties cannot and need not intervene. Nonetheless, social attitudes towards wolves may vary significantly: some people feel wolves are scary and dangerous, whereas others cannot wait for wolves to settle in the Netherlands.

The use of the assessment framework and flow chart ensure that all the various interests and values are taken into account. The way in which the various interests and values are weighed is at the discretion of the authorities and depends on policy, the process may vary each time. The wolf, for example, has the same degree of protection across the Netherlands. Nevertheless, the problems in the area of damage, nuisance, safety and public health may vary per case, as is the case in the behaviour of an individual wolf or a pack of wolves. The welfare of individual wolves and populations of wolves may also vary, and the public moral can differ per region. Although this situation may give rise to different assessments and decisions being made, the application of the assessment framework and flow chart ensure that the process is conducted each time using the same steps. This procedure provides insight into those steps and assesses relevant alternatives.

¹⁴ See the Operationeel Draaiboek Wolf.

3.3 Decline of meadow birds

The initial question in this case study is: should the government (possibly pursuant to obligations under nature conservation law) intervene regarding the decline in the numbers of meadow birds?

A multitude of facts, intuitions, values and interests are in play for the meadow birds case study. Bird numbers and the survival of populations are still under pressure. Issues in the field of bird welfare may be situated either at the level of individuals and populations or at the level of the species themselves. In such cases, the assessment framework and flow chart can be applied separately to each of these levels. At the regional/local level, various factors may be in play which cause the issues to be diverse; such factors may include the impact of predation, groundwater levels, agricultural activities, landscape management, breeding sites and food supplies. Although the cultural value of the birds may be national, the corresponding obligations are international. Our responsibility for the problems that have arisen may also be relevant when carrying out an assessment. Within that assessment, the law and the possibilities of its enforcement may be a reason to intervene. Another reason may be the duty of care; however, economic interests and costs may result in different assessments and decisions. Still, as the assessment is always at the discretion of the authorities and subject to policy, it will vary per population or species and have a different impact in different areas (e.g. differences in the impact of predation). Nonetheless, the assessment framework and flow chart may provide an anchor, in spite of the variable weighing of interests and values.

4. Review and recommendations

The assessment framework and corresponding flow chart that were originally drawn up for suffering animals in the advisory report *Duty of Care, Naturally* may, with some adjustment, also be applied to various cases of non-captive, wild animals. This application has resulted in several important conclusions:

- Although there may be opportunities for intervention (for example, by reducing animal numbers), this does not mean that it is necessary nor that other alternatives are unavailable. Alternatives must be seriously and thoroughly considered in all cases before any type of intervention occurs. In cases where human interests conflict with those of animals, the question whether intervention is required should precede the question of what should be done. For such cases, the assessment framework may be a tool to assist in an ethical consideration or assessment of the values and interests involved in the interventions available.
- The Nature Conservation Act (*Wet natuurbescherming*, Wnb) provides the legal framework within which interventions may take place and which resources may be used. The various steps of the assessment framework offer guidance and force parties to take stock of all relevant values and interests, with the added benefit of making those aspects explicit. As a result, the way in which values and interests are weighed becomes transparent.
- At present, assessments regarding animals in nature make little explicit mention of the welfare (including the health) of animals. The Council recommends that assessments and decisions on animals in nature should clearly outline how they take animal welfare into account, for which the assessment framework may provide guidance.
- European and Dutch nature conservation laws and regulations focus primarily on the conservation of species. As animal welfare and animal health also remain key in any consideration, knowledge of those aspects is crucial to the decision-making parties.
- As a result of the decentralisation of the nature conservation responsibilities, which have been largely shifted from central government to the provinces, differences may arise between provinces in their approaches to animal welfare and conservation of species' populations. Although the results of the assessment in relation to wild animals may of course differ, the method of the assessment should be the same. This fact can be ensured through the use of the RDA assessment framework.

- Wild animals have no conception of which province they inhabit. We, however, have a moral responsibility – free of any gradations – to take animals into consideration. The practical interpretation of this duty of care, however, varies per scenario. An explicit focus on the welfare of non-captive animals when formulating policy can contribute to reducing the number of differences in the regulations on animal and nature conservation policy.
- Animal welfare policy for captive animals remains the responsibility and competence of the State. This responsibility rests with the provinces for non-captive animals (with the exception of animals in nature reserves that fall under the responsibility of the State such as the large water areas). The Council notes that this distinction is not always clear and as such wishes to know how the welfare of non-captive animals in nature is safeguarded. When are both the State and the provinces satisfied?
- Decisions on the welfare of individual animals may have an impact on the welfare of individuals in later generations and on populations of other species. That impact must be taken into consideration in every assessment regarding animal welfare. As such, the assessment framework is not only applied to the current animals, but also in view of future generations and other populations.
- The survival of the species is also a factor that must be taken into account at the level of the relationship between the animal (sufficient species numbers for reproduction and social contact) and the ecosystem (equilibrium between all existing species). Explicitly outlining the various factors within the assessment may result in more clarity as to when and why the interests of the individual (such as welfare) supersede those of the population (species/ecosystem), or vice versa. Applying the various steps and levels of the assessment framework allows us to ensure the concrete implementation of our statutory duty of care to animals in nature.
- The Council notes that the use of the term “intrinsic value” may lead to confusion, e.g. due to the differences between the intrinsic value of animals and the intrinsic value of nature. In addition, as intrinsic value has no measurable quantity, it cannot be used in the assessment of the interests of various species (e.g. fox versus black-tailed godwit) or of individuals and populations. The relationship between the intrinsic value of the animal and the intrinsic value of nature is not outlined further in the relevant legislation. This situation may result in tension and should receive attention in assessments for which the level of populations and ecosystems are important

factors. The Council considers consistency and transparency to be key elements, also in the application of concepts and definitions, and would like to contribute to preventing any confusion or ambiguity. Regarding the intrinsic value of animals, the Council proposes to use its own definition: "*The term intrinsic value refers to the value inherent in an animal, irrespective of its utility.* Respecting this inherent value means factoring in the interests of animals in all decisions that affect them. Specifically, there is a moral obligation for human intervention not to cause structural or serious damage to the welfare, health or integrity of animals or their habitat".

- Although the use of the assessment framework and the corresponding flow chart result in accuracy and diligence, proficient application requires practice. This method is well-suited for diligent and measured decisions made in advance, while it is unsuitable for ad hoc decision-making.

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Annex 1 Definitions and principles

Intrinsic value

The term intrinsic value refers to the value inherent in an animal, irrespective of its utility. Respecting this inherent value means factoring in the interests of animals in all decisions that affect them. Specifically, there is a moral obligation for human intervention not to cause structural or serious damage to the welfare, health or integrity of animals or their habitat.

From: RDA conceptual framework

Animal welfare

'Animal welfare is the quality of life experienced by the animal.' (Bracke et al., 1999) An animal experiences a positive state of being if it is free to perform normal patterns of behaviour specific to its species and can respond adequately to the challenges posed by its environment.

From: RDA conceptual framework¹⁵.

Duty of care

Respecting the intrinsic value of animals means that we must thoroughly and constantly realize that our interactions with animals may impact the welfare, health, integrity and individuality of animals and that we, as humans and as a society, bear a moral responsibility in that regard.

This awareness results in a duty of care on the part of the person or persons within whose responsibility the animal or group of animals falls. The duty of care is related to practical aspects (such as the technical feasibility of measures) and the ethical assessment of the objectives of our actions and their consequences. It can be interpreted and implemented in a variety of ways. Our duty of care encompasses all forms of care, including taking a "hands-off" approach when intervention is unnecessary or even undesirable. This approach may be applied in order to allow animals to live a natural life or because intervention may result in long-term damage. Taking a "hands-off" approach is thus an interpretation of our duty of care, not the absence thereof. The interpretation of the duty of care leads to a continuum of the various types of care, which include active or specific care (at the individual level) and a-specific or passive care (at the level of the habitat of the animal population). The extent to which care should be specific or a-specific, according to Swart and Keulartz (2005; 2011) is related to the human impact on the animal's habitat: the

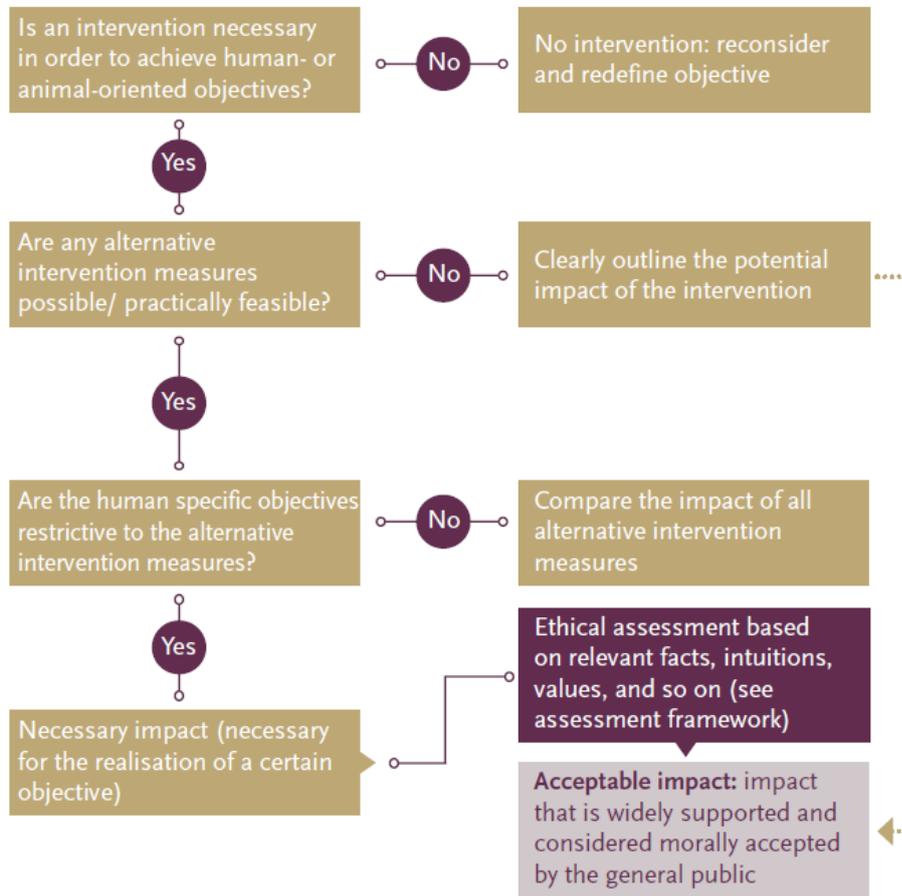
¹⁵ Such challenges relate to hunger, thirst and malnutrition; thermal and physical discomfort; injury and disease; fear and persistent stress stimuli.

greater the human impact, the more specific the human care regarding the welfare of the animal must be (RDA, 2012).

The duty of care that we have towards animals has been included in the laws and regulations both for captive animals (Animals Act) and for non-captive animals and their habitat (Flora and Fauna Act, 1998 and 2017 Nature Conservation Act).

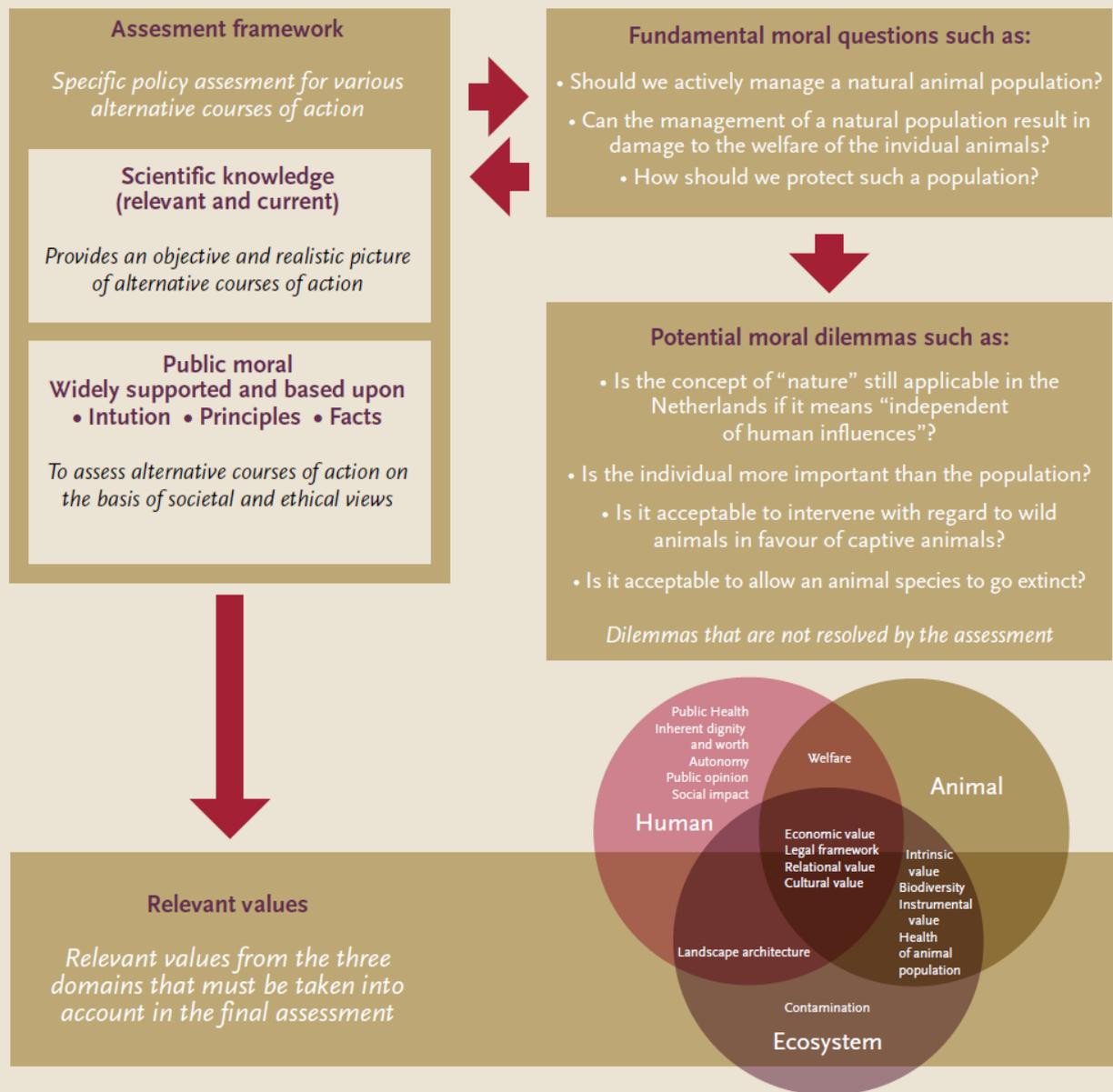
Annex 2 Flowchart and assessment framework

Flowchart



Ethical assessment: see assessment framework below

Diagram of the assessment framework



Annex 3 Urban foxes case study

The following sections illustrate how the assessment framework, flow chart and corresponding questions/steps can be applied to the "Urban foxes" case study in order to consider all relevant interests and values within an assessment that attempts to answer the initial question. Chapter 3 contains a brief reflection on this case study. The results of the case study merely serve as an example of how the assessment framework and flow chart can assist in carrying out an assessment and making a decision. The outcome of this assessment may vary, with the assessment framework and flow chart acting as guidance each time. The case study is by no means presented as an absolute truth and should not be used for decision-making or the substantiation of positions; as such, it does not represent the opinion or views of the Council. Rather, it is an example of potential results and is exemplary of the way in which the assessment framework and flow chart could be applied.

What is the situation?

Step 1: Is it a situation in which the interests of animals threaten to conflict with our own or other interests?

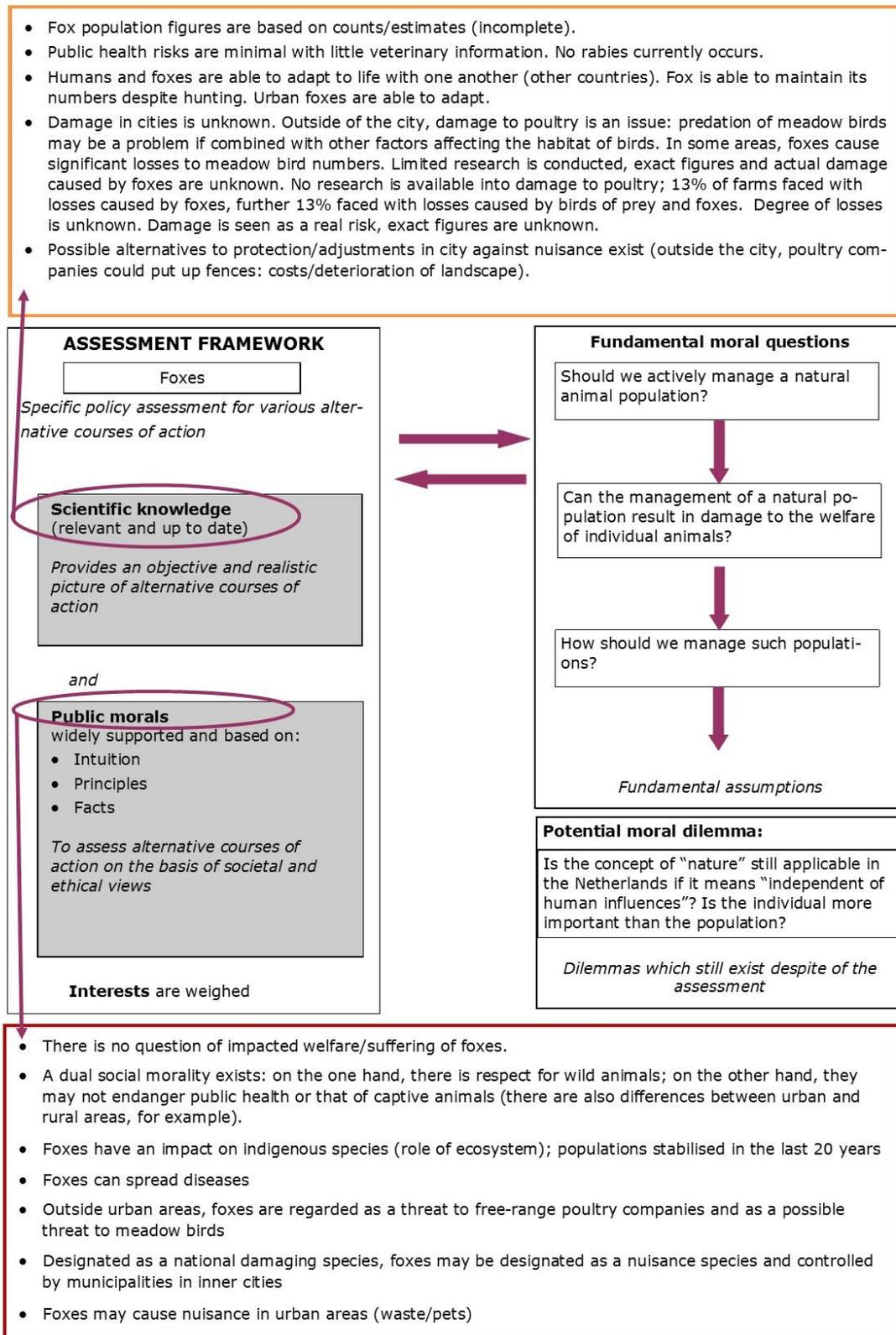
Over the past few decades, foxes have spread across the Netherlands. Although no exact figures on the number of foxes in the Netherlands are available as yet, there has been a stabilisation for the last twenty years. The Netwerk Ecologische Monitoring (Ecological Monitoring Network; Statistics Netherlands (CBS) quality report, 2015) has referred to the nationwide trend as "stable". There are some regions in which the species is on the increase and others where numbers are decreasing. Currently, a significant moderate decrease is found in Gelderland and in urban areas. By contrast, there is a significant moderate increase in lowland marine clay areas and Flevoland. The development of fox numbers in the other provinces, the low moorland and river region is uncertain. Over the past ten years, the population in Limburg and Brabant has seen a moderate decrease, compared with a moderate increase in the South Holland province. The fox is protected under Section 3.10 (included in the annex to the Nature Conservation Act). The fox is designated as a national damaging species (Dutch: schadesoort) (Section 3.1 of the Nature Conservation Decree); as such, within the boundaries of wildlife management units, it may be captured and killed with a rifle (national exemption under Section 3.1, Paragraph 2, of the Nature Conservation Regulations). The exemption or waiver may be based on the damage caused to wildlife (meadow birds) or poultry farms (free-range chickens).

Foxes have also been spreading across urban areas (such as Rotterdam, as from 2002). Within the city, foxes may cause nuisance such as opening rubbish bags and fighting with pets. They may also cause problems in traffic and potentially spread diseases (such as fox

tapeworm and rabies). The Minister, or the provincial authorities pursuant to the provincial bylaw, may designate nuisance species to be controlled by the municipalities (Wnb, Section 3.16). This provision specifically relates to nuisance control in the inner city. The central question of this case is: **should we intervene regarding foxes living in cities (and causing nuisance)?**

Assessment framework Relevant interests and values

Step 2: What are the different interests and values and what is the weighing of these?



- There is no question of impacted welfare/suffering of foxes.
- A dual social morality exists: on the one hand, there is respect for wild animals; on the other hand, they may not endanger public health or that of captive animals (there are also differences between urban and rural areas, for example).
- Foxes have an impact on indigenous species (role of ecosystem); populations stabilised in the last 20 years
- Foxes can spread diseases
- Outside urban areas, foxes are regarded as a threat to free-range poultry companies and as a possible threat to meadow birds
- Designated as a national damaging species, foxes may be designated as a nuisance species and controlled by municipalities in inner cities
- Foxes may cause nuisance in urban areas (waste/pets)

Relevant interests and values:

- Public health/veterinary: fox tapeworm was first found in foxes in our country in 1997; up to now, it has only been found in the south of Limburg and the east of Groningen. The number of infected foxes in the Netherlands is increasing. The likelihood of people becoming infected with fox tapeworm and falling ill as a result is very low (RIVM). In addition, foxes may spread rabies and carry *Trichinella* pr. (zoonosis), scabies, Aujeszky's disease, Canine Carré's disease and lungworm. There have been no instances of rabies in the Netherlands and there is little information on the likelihood of infection with those diseases by other animal species.
 - *Urban foxes: there is presently no danger of infection with fox tapeworm in cities, given the current spread. As there are no instances of rabies in NL currently, this situation does not pose a risk; however, if rabies does enter the country, foxes in urban areas may pose a threat. There have been incidental bite incidents in both England and the Netherlands (extremely rare cases). People can feel unsafe with foxes around (see public opinion).*

- Inherent dignity and worth: protecting the species and preventing any unnecessary damage to the welfare of the fox is in line with prevailing views on the dignity of human beings.

- Autonomy: the autonomy of the fox may conflict with the autonomy of humans.
 - *Urban foxes: foxes have migrated to the cities on their own because of the suitable habitat (varied diet and food supply, cover, tranquillity due to a lack of disturbance of hunting, and so on). Humans have been expanding into the natural habitat of foxes in outdoor areas, forcing foxes to relocate. Foxes have adapted to these circumstances. However, people do want to have a safe living environment.*

- Public opinion: foxes have opponents and admirers. There are also opinion-makers who primarily advocate a rational approach of the fox. This group is not against hunting or damage control a priori, but points out that these activities generally do not achieve the intended objective. In 2015, a majority of parties in Parliament voted in favour of an exemption^{16,17} for foxes (in favour were CDA, CU, D'66, PvdA, SGP

¹⁶ The difference between hunting and damage control is not always made clear. It often concerns damage control, and not hunting; in urban areas, the legal basis is nuisance control.

¹⁷ The Nature Conservation Act of 2017 includes an exemption for the fox in order to prevent potential damage to grounds, buildings or the surrounding area of a land user in the current or following year (Wnb, Section 3.15, Paragraph 5; Nature Conservation Decree, Section 3.1; Nature Conversation Regulations, Section 3.1).

and VVD; opposed were GL, PvdD, PVV and SP). The following organisations have taken a position on foxes: Koninklijke Nederlandse Jagersvereniging, Nederlandse organisatie voor jacht en grondbeheer, belangenorganisaties veehouderij (Z)LTO, Dierenbescherming, Faunabescherming, Vogelbescherming, Natuurmonumenten and Staatsbosbeheer.

- *Urban foxes: people may be afraid of predators in their environment; for example, they may be frightened for their children or for their pets, they might experience disturbances (rubbish bags) or feel that foxes do not belong in the city. However, people may also find it exciting to have wild animals in their environment and regard it as an enrichment of their environment. Hunting foxes in an urban environment is out of the question. Some amateur smallholders of poultry in urban areas who are affected by foxes will say: get rid of the blasted creature. Others will say: the hens can be kept perfectly safe from the fox.*

- Cultural value: the fox appeals to people’s imagination, both in a positive and in a negative sense. The term “sly fox” often has a double meaning when applied to human relations, referring to someone who is both clever and wicked. The fox is also surrounded by various myths in which it is portrayed as a personification of the devil. “Of Reynaert the Fox” is regarded as the seminal text of medieval Dutch literature. These days, the fox not only serves as an occasional scapegoat; it also has an educational function in public awareness, and experience, of nature. The various webcams inside fox dens have a significant number of viewers. Foxes also have their “own” website: www.vulpesvulpes.nl, a private initiative, and a Facebook page: <https://www.facebook.com/pages/Vulpesvulpes-de-vos-op-het-internet/339483496075885?ref=hl>.
- *Urban foxes: for centuries, the fox has been one of the symbols of the tension between man and nature – and predators in particular – both in the wild and in the city.*

- Social impact: foxes are a threat to poultry farms with outdoor paddocks; they are also regarded as a potential threat to meadow birds. The way in which the fox and other factors affect the numbers of wild meadow birds is a complex matter without a uniform answer and may vary significantly according to local area (also see Teunissen et al., 2005; Voslamber et al., 2012).
- *Urban foxes: it may require some adjustments for people to learn to live with foxes in their environment. Pets can be protected by, for example, keeping poultry in cages and or closing the coops. Foxes can be kept out of gardens by erecting*

fences. Currently, the danger of bite incidents is very low. Any nuisance caused by foxes may be kept to a minimum if measures are put in place.

- Welfare including health (individual, group, species): foxes are highly adaptable and can be found in practically every habitat. The fox lives in areas with an adequate food supply and sufficient cover, preferring to hunt on the border of habitats. A fox's territory will vary from 100 to 400 hectares, but it can also be far larger depending on the availability of nesting sites and food supply. The size of a fox's territory indicates how "good" the habitat is: the more food there is and the more certainty it has that the food supply will be available throughout the year, the smaller the territory will be. Man is its only natural enemy (hunting and traffic). Apart from the dangers of hunting and traffic, the Dutch landscape offers foxes sufficient survival opportunities. A fox must take in roughly five hundred grams of food each day, which is easy to do in the Netherlands as foxes have a highly varied diet. No data are available on the health of individual foxes in the Netherlands, nor on the health of the population. Major diseases that may affect foxes are scabies and rabies. There have been no instances of rabies in foxes within the Netherlands. They may also carry fleas, ticks and parasites including fox tapeworm, which does not damage a fox's health.
 - *Urban foxes: they require sufficient food, cover and tranquillity. Would controlling foxes in urban areas result in a greater risk of welfare problems? Although the tranquillity would disappear and there would be individual welfare issues, the population could adapt.*
- Economic value: foxes have a positive economic value, in the sense that they are a natural enemy of mice, rats and rabbits; as such, they prevent damage to crops and the spread of diseases by these prey animals. This value has not been calculated. Foxes also have a negative economic value because they cause damage to farms with free-range chickens kept in paddocks. Although the extent of this damage is unknown, it does not seem very great as testified by the reports of fauna management units.
 - *Urban foxes: they cause negligible economic damage.*
- Legal framework: the fox is designated as a national damaging species (schadesoort; Nature Conservation Decree, Section 3.10 and Annex); and may, within the boundaries of wildlife management units, be captured and killed with a rifle (national exemption under Section 3.1, Paragraph 2, of the Nature Conservation Regulations). The exemption or waiver may be based on the damage caused to wildlife (meadow

birds) or poultry farms (free-range chickens). The Minister, or the provincial authorities pursuant to the provincial by-law, may designate nuisance species to be controlled by the municipalities (Wnb, Section 3.16). This provision specifically relates to nuisance control in the inner city.

- Relational value: foxes are one of the largest predators that still occur within the Netherlands in the wild. As such, the status of this species in part determines the way that the relationship between people and nature is experienced.
 - *Urban foxes: this relational values may be even greater in urban areas, due to the uniqueness of the penetration of nature into an exclusively human domain.*
- Intrinsic value: the intrinsic value of the fox is no different from that of other non-captive mammals in the Netherlands.
- Instrumental value: see economic value and biodiversity.
- Biodiversity: foxes are valuable to the ecosystem. Their numbers are regulated by the presence of food and by mutual competition. The amount of prey animals determines the number of predators. If one were to remove foxes, this measure would mean removing the natural enemy of mice, rats and rabbits. Foxes are hunted, as they are perceived to be a threat to ground-nesting meadow birds. Nevertheless, significant losses in numbers due to natural enemies are a normal occurrence among meadow birds and need not have a detrimental effect on the populations. Controlling foxes would mean controlling a natural enemy of various species, including geese.
 - *Urban foxes: how dependent is the fox population in the country on the urban fox population?*
- Contamination (environment): none.
- Landscape architecture/habitat: also see welfare (individual, group, species), intervention in natural habitat, weighing interests of various animals, duty of care.
 - *Urban foxes: foxes have migrated to the cities partly because of the food supply (which we help make available to them through unprotected pets and rubbish bags) and partly because its natural habitat outside the city is being taken up by us (residential neighbourhoods/landscape management, and so on). We bear part of the responsibility for the adaptation of the fox's habitat. Although we could have predicted this situation to an extent, the only measures that we have taken in rural areas are to hunt foxes in order to control population numbers; the*

population in the Netherlands is currently stable, although numbers may vary locally.

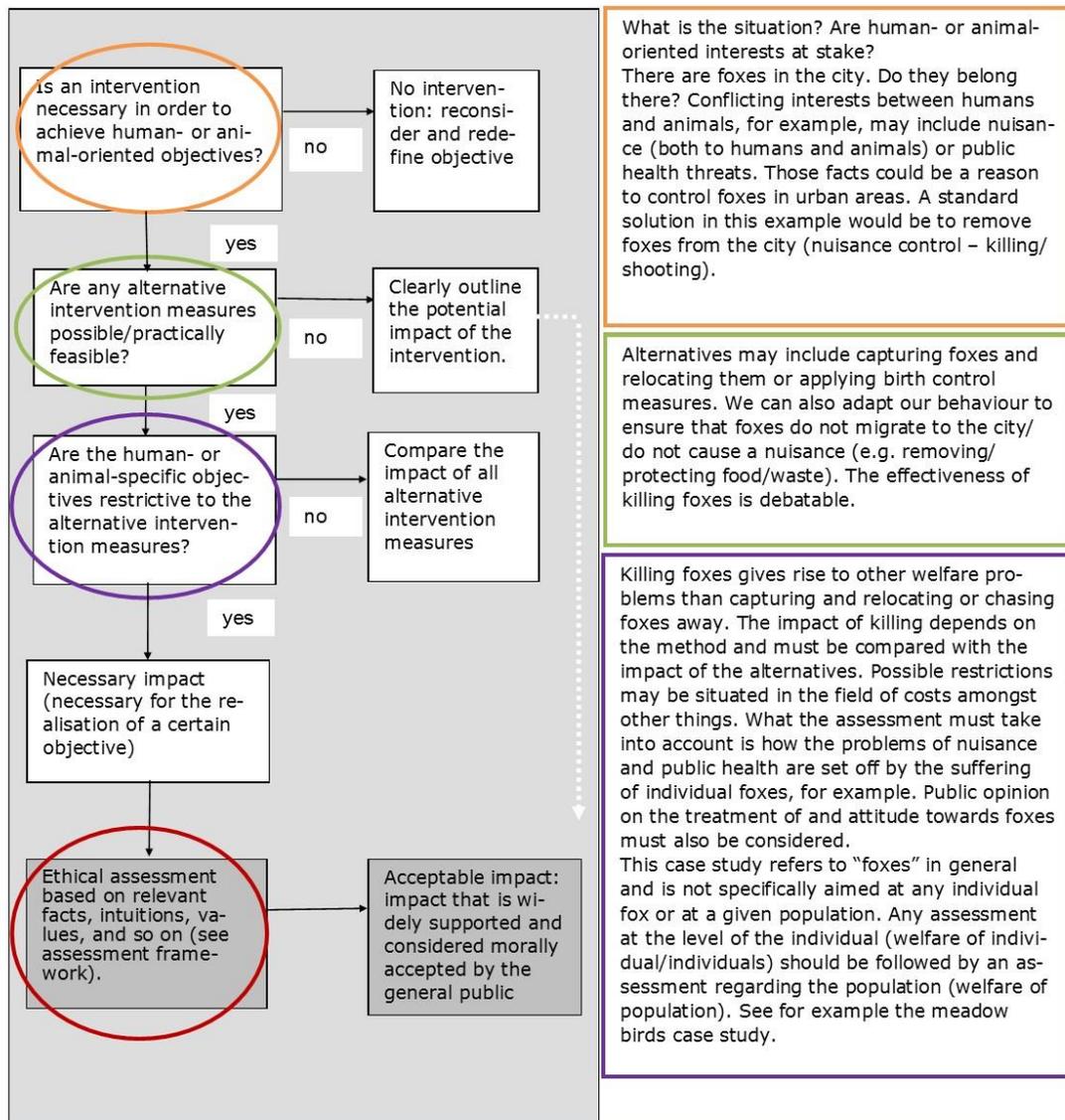
Weighing of interests and values:

This assessment must be carried out by the authorities.

The assessment is followed by Step 3: What are the intervention measures available?

This step involves identifying all possible interventions. The flow chart below provides an example of the intervention (killing, e.g. by shooting) and possible alternatives. These examples do not constitute all the interventions that are available for this case; the chart merely illustrates a potential course of action.

Flow chart



Ethical assessment: All interests/values are appointed to the assessment framework. The background always plays with how to deal with uncertainties/risks and assess whether there is sufficient information to make a proper assessment. As well as how great our responsibility is. Looking at all interests and our responsibility can be an example of an assessment; foxes hardly cause problems in the city at the moment. Problems in the area of nuisance (garbage/pets) can be prevented by adjusting our behavior. It is probably also partly because of us that the fox comes to the city (food/changes in the original habitat) and we have to take this into account. The animals will come by themselves and can also leave. Since we are partly responsible for the situation, this can be included in the consideration. Risks for public health are now small, but have to be watched (for example, future problems might be a reason to intervene). Scientific knowledge, social morality and weighing of interests would then lead to no for killing foxes in step 3: there are sufficient alternative measures that can be tried first. Which one is chosen depends on a specific comparison of those alternatives, it can also be a combination of alternatives, depending on local situations. On the other hand, in other cases there may be a weighing-up based on serious nuisance, where there are no alternatives and as a result of which provincial states see reason to designate the fox as a nuisance species. This then leads in step 2 to making the intervention explicit and assessing the impact. The weighing of values and interests can always lead to a different outcome, while the same steps of the assessment framework and flow chart can be a guideline.

Annex 4 Wolves crossing the border

The following sections illustrate how the assessment framework, flow chart and corresponding questions/steps can be applied to the "Wolves crossing the border" case study in order to consider all relevant interests and values within an assessment that attempts to answer the initial question. Chapter 3 contains a brief reflection on this case study. The results of the case study merely serve as an example of how the assessment framework and flow chart can assist in carrying out an assessment and making a decision. The outcome of this assessment may vary, with the assessment framework and flow chart acting as guidance each time. The case study is by no means presented as an absolute truth and should not be used for decision-making or the substantiation of positions; as such, it does not represent the opinion or views of the Council. Rather, it is an example of potential results and is exemplary of the way in which the assessment framework and flow chart could be applied.

What is the situation?

Step 1: Is it a situation in which the interests of animals threaten to conflict with our own or other interests?

Wolves returned to Germany in 1990 and a rapid expansion of their habitat has taken place since 2002. In March of 2015, the wolves extended their territory across the border: a young wolf from Germany roamed the provinces of Groningen and Drenthe for several days (IPO Website, 2016).

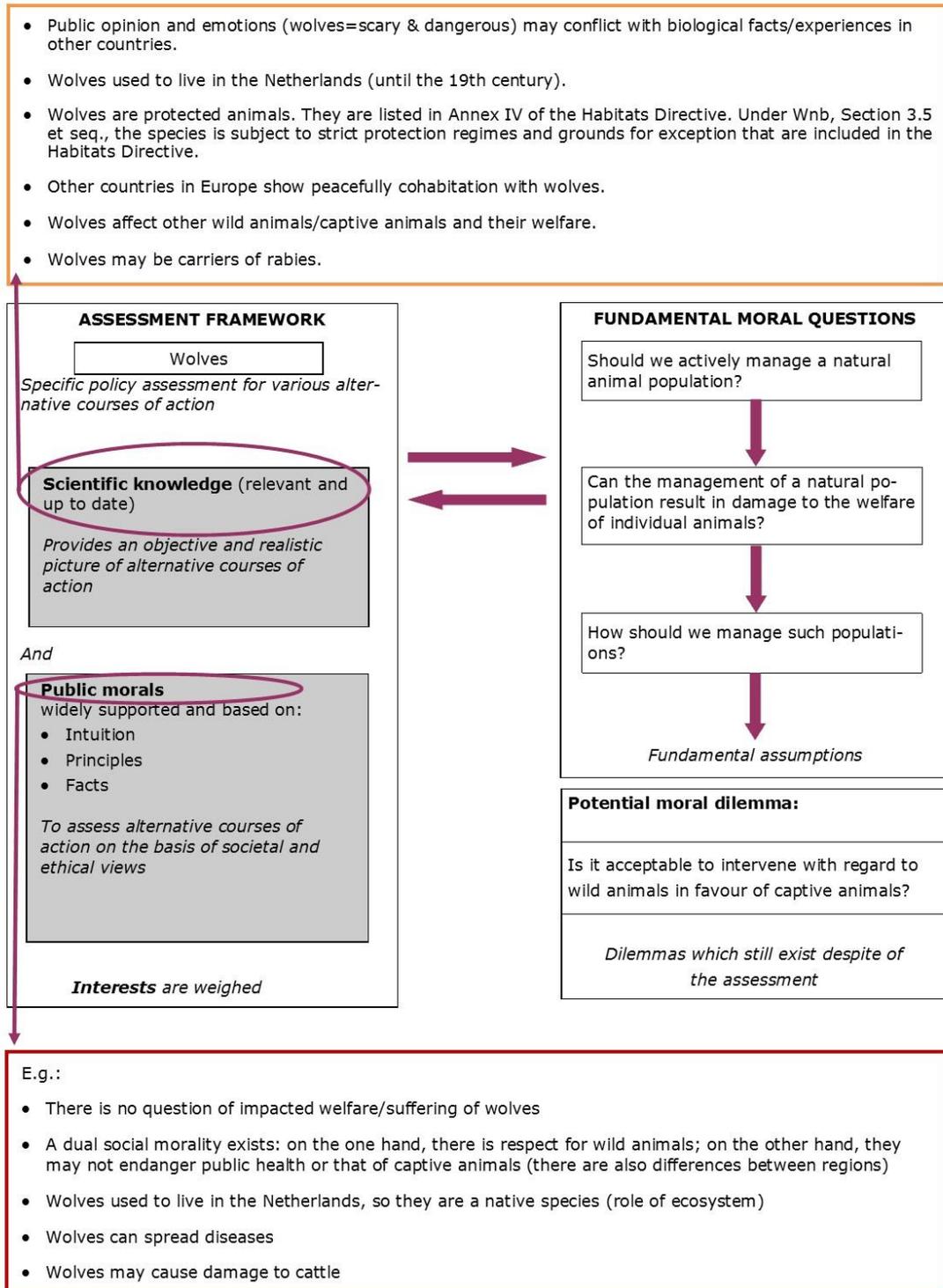
This situation gave rise to a great deal of commotion in public debate within the Netherlands. What was to be done about the wolf? Would it stay? Would more come? Was there any threat to cattle? Was it still safe for people's children to play outside? A barrage of questions were asked, based both on facts and on emotions. Eventually, the wolf returned home. However, the questions remained regarding any wolves or packs of wolves to arrive in future. The initial question of this case is: **should we intervene if a wolf is sighted in the Netherlands?**

The wolf is a protected species in the Netherlands. As such, the killing, wounding or capturing of wolves is prohibited by law. For this reason, how should the arrival of a wolf, the discovery of a dead wolf or any damage caused by wolves be tackled? In order to be prepared for the arrival of the wolf, a study was conducted to outline the potential impact (G.W.T.A. Groot Bruinderink and D.R. Lammertsma, 2013), consultations took place (State, provinces, Wildlife Compensation Fund (Faunafonds) and civil society organisations) and a wolf strategy was drafted (2013); the Operational Scenario for Wolves (Operationeel Draaiboek Wolf; IPO, 2016) was published more recently. This scenario

distinguishes between five stages of migration of wolves to the Netherlands, from cases involving incidental roaming wolves to cases envisaging ten years after the first reproduction of wolves in the Netherlands. The scenario focuses on the first stage; i.e. where a roaming wolf enters the Netherlands occasionally.

Assessment framework Relevant interests and values

Step 2: What are the different interests and values and what is the weighing of these?



Relevant interests and values:

- Public health/veterinary: there have been very rare instances of wolves attacking humans. “If it happens, it is for wolves usually a combination of having become accustomed to humans (habituation) and being unable to find enough food in the wild.” (McNay and Mooney, 2005, in Bruinderink et al., 2012). Wolves may be carriers of various parasites, viruses, bacteria and fungi. “Because wolves travel such large distances and eat potentially diseased prey and bait, they are able to spread certain diseases very rapidly in theory. This ability creates the risk of transmitting diseases to humans (zoonoses), wildlife and pets.” (Kreeger, 2003, Stubbe, 2008, in Bruinderink et al., 2012). For example, wolves may be carriers of rabies. Many other countries in Europe show peaceful cohabitation with wolves.
- Intrinsic dignity and worth: protecting the species and preventing any unnecessary compromise to the welfare of the wolf is in line with prevailing views on the dignity of human beings.
- Autonomy: the autonomy of the wolf may conflict with the autonomy of humans.
 - *Wolves have migrated to the Netherlands on their own. Originally, until the late 19th century, wolves were native to our country. Wolves are able to survive well in landscapes dominated by humans (cultural landscapes).*
 - *People, however, want a safe living environment.*
- Public opinion: public opinion on wolves is varied; some people are afraid of wolves and the impact that they might have on our safety, our cattle and on nature. However, there are also people who welcome the coming of wolves and see it as an asset to our natural environment. There are various attitudes and emotions surrounding wolves (Bruinderink et al., 2012).
- Cultural value: the wolf appeals to people’s imagination, both in a positive and in a negative sense. In fairy tales, wolves tend to be cold-blooded and cruel creatures that eat people (Little Red Riding Hood) and animals (The Wolf and the Seven Young Kids, The Three Little Pigs). Yet wolves are also caring and nurturing when raising human children (Remus and Romulus, The Jungle Book). Furthermore, the wolf is associated with trickery and deception (a wolf in sheep’s clothing, role in fairy tales).
- Social impact: with the arrival of the wolf to the Netherlands , a large predator makes its return to our country. We are no longer used to living with such large predators and do not know how to deal with their presence (children, pets, livestock, wildlife).

To do so, we will have to adapt our behaviour in part, which may cause controversy. In principle, wolves tend to avoid humans.

- Welfare including health (individual, group, species): roaming individual wolves are usually solitary males. How is the welfare of the population? How are population levels? Is there sufficient food/peace/space?
- Economic value: wolves have a positive economic value, in the sense that they are alpha predators who form the natural enemy of smaller mammals and in that way prevent both damage to crops and the spread of diseases by these prey animals. This value has not been calculated. Wolves also have a negative economic value, because they cause damage to livestock.
 - *When it concerns the arrival of incidental wolves, the economic losses due to nuisance and damage to livestock will be negligible.*
- Legal framework: the wolf is a protected native species and is listed in Annex IV of the Habitats Directive. Under Wnb, Section 3.5 et seq., the species is subject to strict protection regimes and grounds for exception that are included in the Habitats Directive. As such, the killing, wounding or capturing of wolves is prohibited by law, subject to the exemption provisions.
- Relational value: the wolf is one of the largest predators in Europe; on its return to the Netherlands, it will be our largest predator. As such, the status of this species in part determines the way that the relationship between people and nature is experienced.
- Intrinsic value: the intrinsic value of the wolf is no different from that of other non-captive mammals in the Netherlands.
- Instrumental value: see economic value and biodiversity.
- Biodiversity: wolves are valuable to the ecosystem. Their numbers are regulated by the presence of food and by mutual competition. The amount of prey animals determines the number of predators. Wolves not only affect the populations of animals, but research has shown that they may also affect the course and development of nature (e.g. rivers). Through the way in which they exercise pressure on populations of large ungulates, these prey animals change their grazing habits which in turn changes the landscape. The arrival of wolves may change the

dynamics of the existing ecosystem, both in a positive and in a negative sense (Bruinderink et al., 2012).

- Contamination (environment): none.
- Landscape architecture/habitat: also see welfare (individual, group, species), intervention in natural habitat, weighing interests of various animals, duty of care. Will there be any changes in the landscape due to different management, protection of livestock (for example, fencing)?
 - Wolves are coming to the Netherlands. Is there sufficient suitable habitat? Sufficient food supply? Is livestock adequately protected?

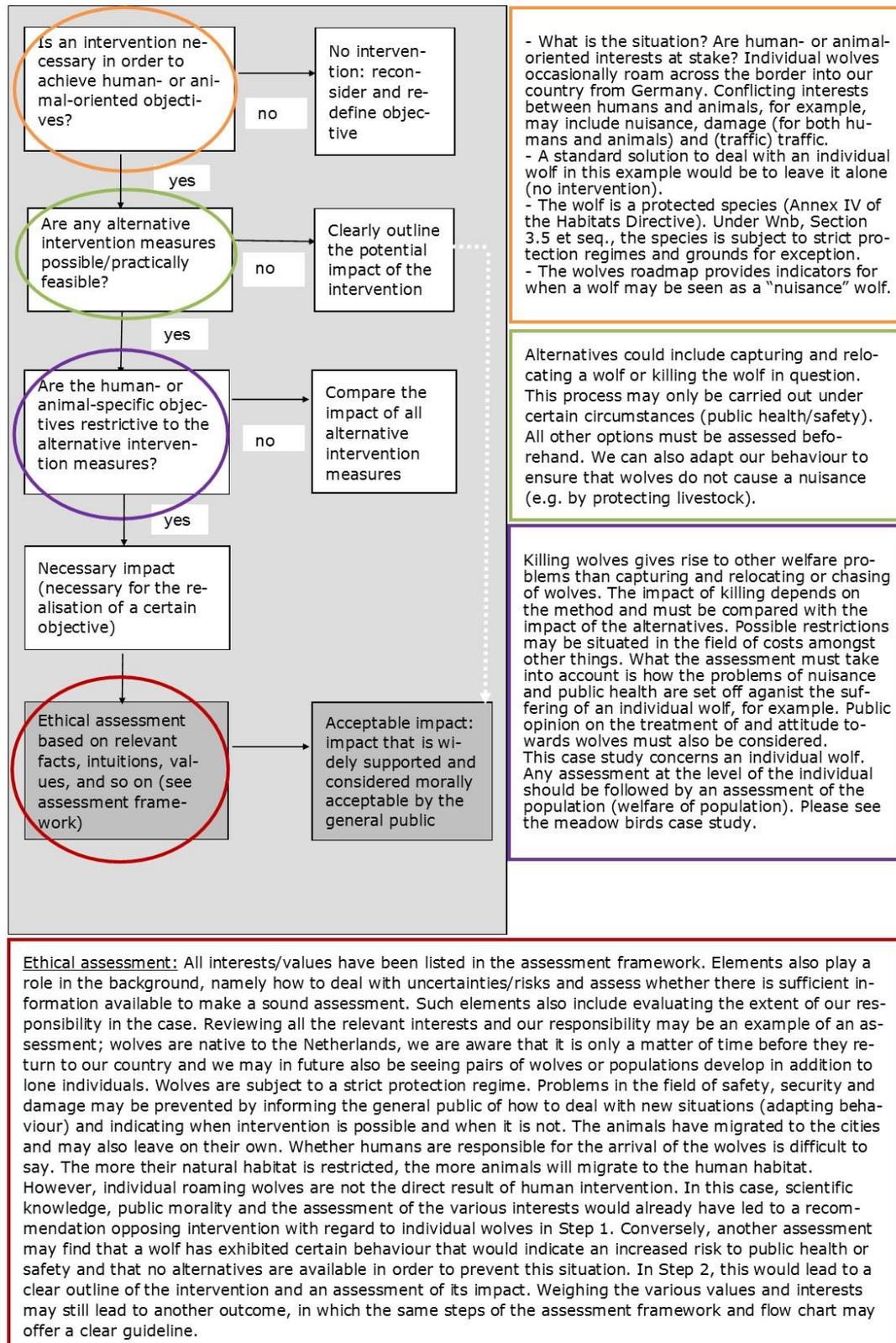
Weighing of interests and values:

This assessment must be carried out by the authorities.

The assessment is followed by Step 3: What are the intervention measures available?

This step involves identifying all possible interventions. The flow chart below provides an example of the intervention and possible alternatives. These examples do not constitute all the interventions that are available for this case; the chart merely illustrates a potential course of action.

Flow chart



Annex 5 Decline of meadow birds case study

The following paragraphs illustrate how the assessment framework, flow chart and corresponding questions/steps can be applied to the "Decline of meadow birds" case study in order to consider all relevant interests and values in an assessment that attempts to answer the initial question. Chapter 3 contains a brief reflection on this case study. The results of this case study merely serve as an example of how the assessment framework and flow chart can assist in carrying out an assessment and making a decision. The outcome of this assessment may vary, with the assessment framework and flow chart acting as guidance tool each time. The case study is by no means presented as an absolute truth and should not be used for decision-making or the substantiation of positions; as such, it does not represent the opinion or views of the Council. Rather, it is an example of potential results and is exemplary of the way in which the assessment framework and flow chart could be applied.

What is the situation?

Step 1: Is it a situation in which the interests of animals threaten to conflict with our own or other interests?

Recent years have seen a significant decrease in meadow bird numbers within the Netherlands. The phenomenon received a lot of media attention when a press release from Statistics Netherlands (Centraal Bureau voor de Statistiek, CBS) was published in the summer of 2015 entitled "Meadow birds take nosedive". The article stated that studies had shown the poor condition of most species of meadow bird in the Netherlands, with most species having seen a sharp decline in numbers since 1990 (CBS, 2015). Both this year and the last had nature conservation organisations sounding the alarm again on the decline and threatened survival of some species. In 2017, CBS published figures indicating a decrease of 60% to 70% in farmland birds since 1960 (CBS, 2017).

Vogelbescherming Nederland (Netherlands Society for the Protection of Birds) had previously sought to foster more awareness of the problem and started the "Red de Rijke Weide" ("save our rich meadows") campaign, gaining some 100,000 supporters. The topic is also very current in politics. Questions have been raised in Parliament regarding the decline of meadow birds, while concerns have also been voiced on the subject in municipal politics. A start was made with the introduction of a National Action Plan for Meadow Birds (Nationaal Plan van Aanpak Weidevogels), but according to nature conservation organisations it initially was not sufficient. In 2016, Vogelbescherming Nederland lodged a complaint against the Netherlands with the European Commission. Earlier this year, the

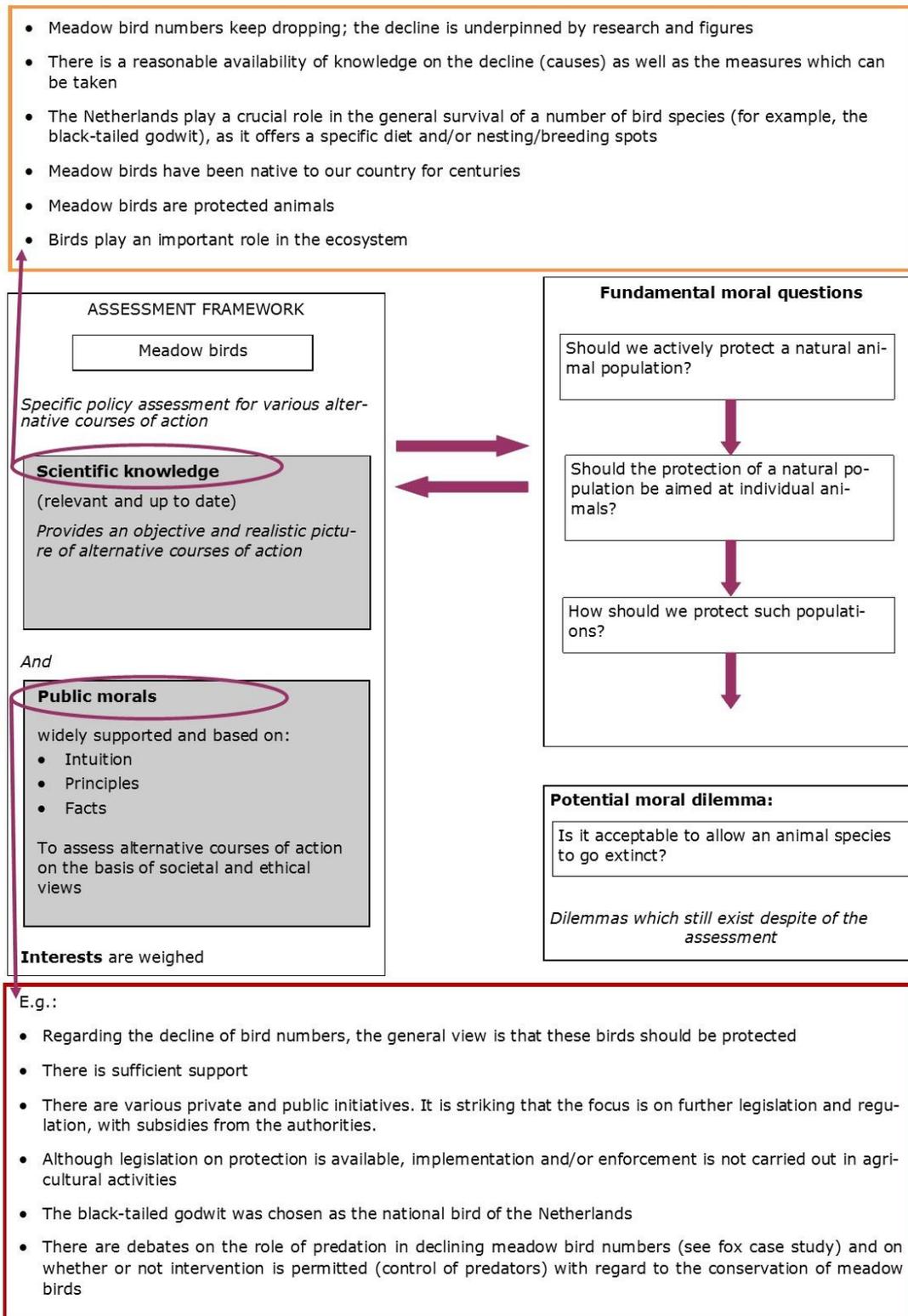
Minister for Agriculture sent a letter to Parliament outlining three scenarios designed to stabilise and maintain a healthy meadow bird population.

Meadow birds such as the lapwing, black-tailed godwit and oyster catcher have been native to the cultural landscape of the Netherlands and its identity for centuries. The Netherlands may also play a crucial role in the survival of the species worldwide. Meadow birds are protected species under the EU Birds Directive and the Dutch Nature Conservation Act. Neither birds nor their nests may be damaged or disturbed and individuals may not be injured or killed. Their habitat is subject to a protection regime.

If no measures are taken to reverse the decline of meadow bird populations, these birds may die out in the Netherlands. The initial question of this case is: **should the government (possibly pursuant to obligations under nature conservation law) intervene in the decline of meadow bird numbers?**

Assessment framework Relevant interests and values

Step 2: What are the different interests and values and what is the weighing of these?



Relevant interests and values:

- Public health: some birds may contribute to the spread of diseases (West Nile Virus, AI). This risk does not apply to the black-tailed godwit, lapwing, oyster catcher and farmland birds.
- Inherent dignity and worth: protecting the species and preventing any unnecessary compromise to the welfare of the lapwing and the black-tailed godwit (and that of their predators) is in line with prevailing views on the dignity of human beings.
- Autonomy: the autonomy of the birds may conflict with the autonomy of humans.
- Public opinion: the decline in species diversity is experienced as something negative. NGOs have been set up to fight for the interests and survival of farmland and meadow birds. Nature and birds also receive a great deal of media attention; for example, in the television programme “Vroege Vogels” (Early Birds) and the website “Beleef de lente” (Experience spring). The latter received 1 million hits and allowed viewers to follow the trials and tribulations of various birds during breeding season. In electing the black-tailed godwit as national bird, the Minister for Agriculture also expressed the will to save it from further decline, drafted a proposal for a scheme and made funds available for research. However, nature conservation organisations felt that the funds should have been allocated elsewhere, given the extensive knowledge already available on causes and possible measures. There are various positions on the control of predators in light of the preservation of meadow birds.
- Cultural value: meadow birds such as the lapwing and lark are part of Dutch cultural heritage and its scenic value. The black-tailed godwit was chosen as the national bird of the Netherlands. These birds are part of the archetypal Dutch landscape. Old Dutch school charts often show meadows that characteristically feature these birds. In addition, traditions such as the annual search for lapwings’ eggs is rooted in our culture. Areas in which the birds have disappeared are referred to as “dead landscape”.
- Social impact: birds receive a lot of attention/limelight. Protection costs money and leads to higher cost prices, including for agricultural activities.
- Welfare including health (individual, group, species): Individual. There are no data available on whether the decrease in numbers has affected the individual welfare of animals (including health) in a shrinking population. Shrinking populations are less

resistant to external influences, which may have an adverse effect on the welfare (including health) of individuals. A decreasing food supply will adversely affect the welfare (including health) of individuals, as will injuries by mowing/cutting activities. The decline in meadow bird numbers is in part associated with animal suffering. Animals may be injured or killed by early mowing activities, or they may die of starvation due to lack of food. The lack of breeding spots may also affect the welfare of adult animals. These influences may exceed the adaptive capacity of individual animals.

- Population: The decline in numbers has jeopardised the welfare of populations and possibly even put their survival at risk. A group of animals should have the freedom to adapt to the prevailing environmental conditions, where the degree of freedom of all the individuals in a given group or population is regarded as a functional part of the whole. As is the case with individual animals, shrinking populations of meadow birds may be adversely affected by a lack of food, breeding spots and external influences. All of these influences may exceed the adaptive capacity and self-sufficiency of the population (given the decline in animal and population numbers).
 - Other species. Any assessment regarding meadow birds and their predators will be complex in the field of welfare. Controlling predators in favour of meadow birds will compromise the welfare of the predators. By contrast, there may be considerations that discourage predator intervention, such as the welfare of foxes (vulnerable periods and welfare of young foxes) or the disturbance of meadow birds when dealing with predators. From a welfare perspective, there are various reasons either to intervene (in management) or to take a hands-off approach.
- Economic value (including damage): meadow birds do not cause any damage. Although measures to preserve black-tailed godwit populations may affect potential business, no data are available. There are calculations of the additional costs of measures that estate managers/farmers can take, which have been detailed in the various management packages. Taking additional measures to protect birds will entail additional costs. Conversely, excursions, tourism and sales of meadow bird-friendly products may also result in profits.
- Legal framework: all meadow birds are subject to a strict protection regime under the EU Birds Directive and Section 3.1 et seq. of the Nature Conservation Act. Breeding birds and their nests may not be damaged or disrupted, nor may animals be killed or injured. Nonetheless, the enforcement and implementation of these measures is not always carried out. In practice, both the duty of care and the

prohibitions are rarely if ever enforced with regard to normal farming activities. Although a code of conduct for the agricultural sector may provide a solution, no such code is in place. Stimulation from the government is absent or insufficient, due to the perceived lack of support. Predators of meadow birds, such as the fox, are also protected (for the legal framework, see the fox case study).

- Relational value: this aspect relates to the social interaction of people with nature and their living environment, including society's relationship with cultural heritage landscape and associated birds; i.e. following birds via the "Beleef de Lente" site.
- Intrinsic value: the intrinsic value concerns the integrity of birds. Predators also have an intrinsic value. Because intrinsic value is not quantifiable, it cannot be used to assess the interests of different species.
- Instrumental value: see economic value and biodiversity.
- Biodiversity: species diversity is crucial to biodiversity; a lack of diversity has a negative effect on the extinction of populations. The use of pesticides, mowing management and landscape management may negatively affect biodiversity. These issues may also affect insect populations as well as other birds and animals.
- Contamination (environment): not applicable. Pollution and chemical substances are, however, one of the causes of the decline.
- Landscape architecture/habitat: suitability of the habitat for birds. There are limits to birds' adaptive capacity, which vary per bird species. The cultural landscape has changed due to changes in landscape management.

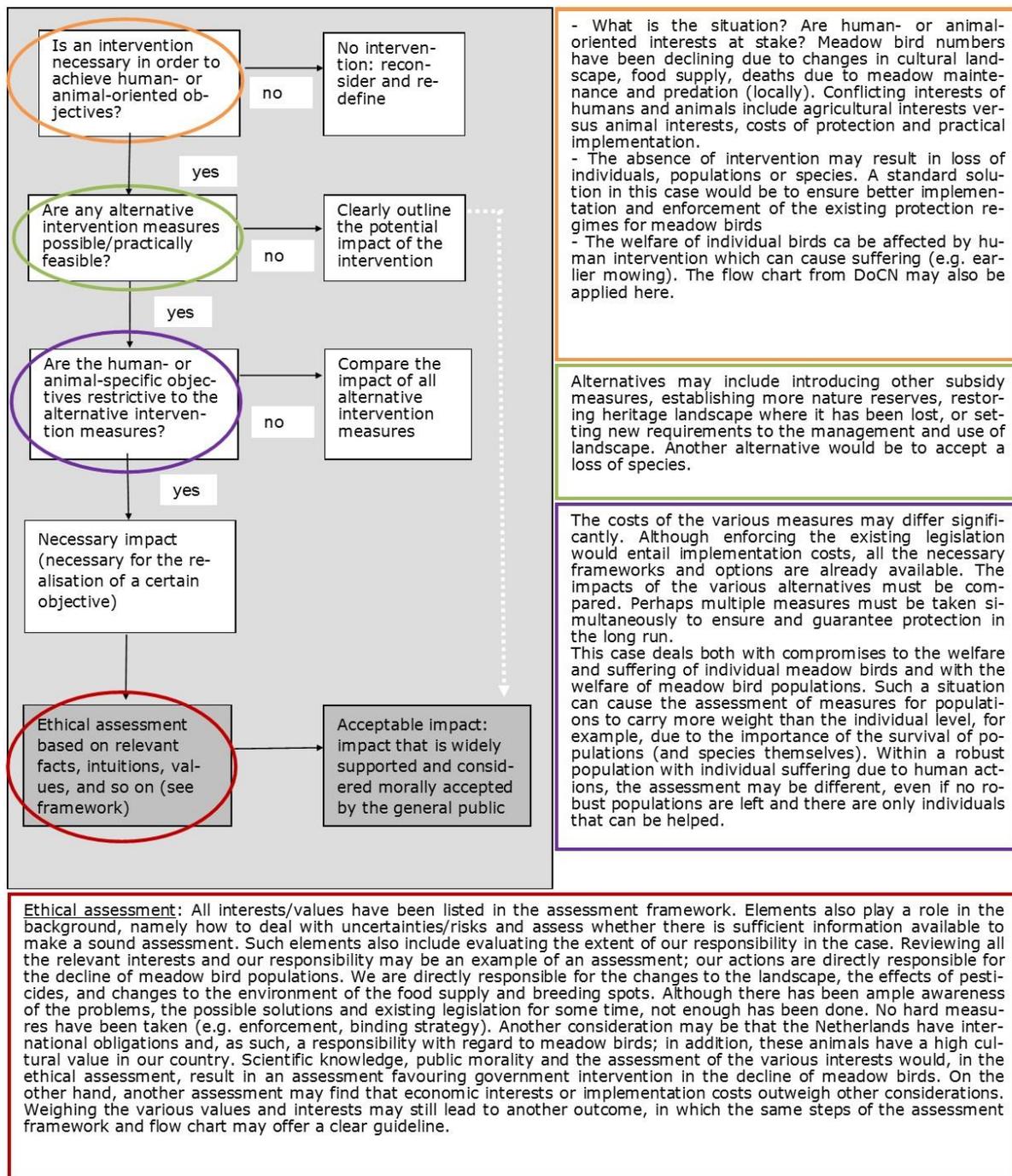
Weighing of interests and values:

This assessment must be carried out by the authorities.

The assessment is followed by Step 3: What are the intervention measures available?

This step involves identifying all possible interventions. The flow chart below provides an example of the intervention and possible alternatives. These example do not constitute all the interventions that are available for this case; the chart merely illustrates a potential course of action.

Flow chart



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The Council on Animal Affairs (Raad voor Dierenaangelegenheden (RDA)) is an independent council of experts that provides the Ministry of Agriculture, Nature and Food Quality with solicited and unsolicited advice on multidisciplinary issues in the field of animal welfare and animal health. The Council on Animal Affairs consists of members with different backgrounds and expertise, whose participation is in a personal capacity without consultation and not restricted by any instructions.

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