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The Potential of Transformative Conservation for Human-Wolf Coexistence in the Netherlands: An Assessment of Wolvenplan 2025.

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Abstract

The grey wolf made its comeback in the Netherlands in 2015. Due to the high proportion of urbanised and agricultural landscapes, there is little space for nature to exist in its wild state without human disturbance. Therefore, wolf predation on livestock becomes increasingly more likely, creating conflicts within human-wolf coexistence. The Netherlands released a plan to inform coexistence between humans and wolves in April 2025, titled the Wolvenplan. This plan was assessed using the concept of transformative change, specifically the six recommendations which can facilitate transformative conservation as proposed by Fougères et al. (2022). One key finding of this thesis is that the Wolvenplan was partially aligned with half of these recommendations. Stakeholder analysis and systems mapping were used to evaluate the potential of transformative conservation for human-wolf coexistence. In conclusion, implementation of the recommendations could lead to more equitable, just and sustainable conservation and human-wolf coexistence. Further primary research on the practical application of the results of this thesis would provide more insights on how realistic the recommendations are in practice.

Key Words: Wolvenplan 2025, human-wolf coexistence, transformative conservation, transformative change, multispecies coexistence, The Netherlands

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Positionality Statement

As a Belgian woman studying in the Netherlands, I am familiar with the 'lowland' countries where wolves started making a comeback around the same time, in 2015/16. It is important to mention that I am biased in favour of the wolf (in the Netherlands) due to my personal beliefs and the influences of those around me, advocating for the rights of wolves and other animals. The presence of the wolf is a current topic of controversy in the Netherlands, with people taking sides at two relative extremes. While I personally think that the wolf has a right to exist and that coexistence is possible, I aim to consider other perspectives and to write this thesis in a way that appeals to everyone, not just so-called "pro-wolf" people. However, my bias, or so-called 'pro-wolf stance' may still be present in this paper.

Introduction

The comeback of *Canis lupus*, the grey wolf, has brought about differing opinions and controversies in the public discourse (IPO, 2025). Just under 200 years ago, an increase in the deliberate persecution and hunting of wolves caused the wolf's population to diminish across European landscapes (Deinet et al., 2013). Since then, a shift in public perception, stricter conservation laws imposed by the European Union (EU), a general increase in wild ungulate (i.e. mammals with hooves) numbers and the wolf's high adaptive capacity have led to the comeback of the wolf across Europe (Deinet et al., 2013). In the Netherlands, the beginning of the wolf's comeback was signalled by the first official wolf sighting in 2015, when a male wolf nicknamed 'Wanderwolf' crossed the border from Germany into the Dutch province of Drenthe (NU.nl & ANP, 2015; Lelieveld et al., 2016). The wolf's comeback was officially established by the first proof of reproduction in 2019 (Jansman et al., 2021a).

The wolf is listed in Annexes II and IV of the EU Habitats Directive (Council Directive 92/43/EEC, 1992) and Annex II of the Bern Convention (LCIE, 2022). This means that the wolf's legal status is one requiring "strict protection" (Council Directive 92/43/EEC, 1992). As the specific legal status of the wolf differs between countries, management and monitoring cannot occur at EU scale, but is left to each country individually (LCIE, 2022). However, the protection status of the wolf was recently changed from 'strictly protected' to 'protected' on a European level, through the amendment of Council Directive 92/43/EEC by Directive 2025/106/EU (European Commission, 2025a), as a response to growing reports of conflicts with humans (European Parliament, 2025). The amendment would allow greater flexibility in management and conservation (European Commission, 2025b). In the Netherlands wolves are a "protected" species (LCIE, 2022). This protects the wolf from hunting and human disturbance, but if an individual wolf shows undesirable and unusual behaviour it may be deemed a "problem wolf" allowing it to be killed in exceptional situations (International Wolf Center, 2023). The conditions

that a wolf has to fulfil in order to be deemed a problem animal are unclear; on one hand, official EU policy states that exemptions to the protection law can be given on a case-by-case basis (Blanco & Sundseth, 2023), however, the Dutch Interprovincial Organisation ["*Interprovinciaal Overleg*"] (IPO) states that a wolf becomes a "problem wolf" when it attacks protected livestock at least twice in a period of a least 2 weeks (IPO, 2025). The proposed amendment was accepted in May of 2025, and member states of the EU will have 18 months to comply with the change in directive (European Parliament, 2025).

Wolvenplan 2025

Wolvenplan 2025 ["*Wolf Plan"*] (hereafter referred to as "Wolvenplan"), published in April 2025, was developed by the "Wolf working group" of the IPO in collaboration with the Dutch Ministry of Agriculture, Fisheries, Food Security and Nature ["*Ministerie van Landbouw, Visserij, Voedselzekerheid en Natuur*"] (hereafter referred to by the Dutch abbreviation: "LVVN") as a follow-up of the first 'Monitoringplan Wolf' from 2019 (Klees et al., 2019). The Wolvenplan is a set of policies aimed to inform and guide Dutch provinces on human-wolf coexistence (IPO, 2025). It includes background information about the wolf species, legal aspects, monitoring, communication strategies and a set of intervention guidelines, which present suggested steps depending on differing wolf behaviour (IPO, 2025).

Future vision of Wolvenplan 2025

The Wolvenplan recognises that the Netherlands is currently in a transition period wherein society is still in the process of learning how to coexist with the wolf (IPO, 2025). The process of adjusting to coexistence will take time because of the Netherlands' unique position: high amounts of infrastructure, few wild areas, yet still the establishment of several wolf packs (IPO, 2025). The IPO states that the goal of coexistence should "very likely" be sustainable and

low-conflict, even though this may not be the goal for every stakeholder involved. Overall, the goal of the Wolvenplan is to find a balance between protection and management (IPO, 2025).

Transformative conservation

Transformative conservation is defined by Fougères et al. (2022) as a process of "rethink[ing] the relationships between individuals, society, and nature" and "restructur[ing] [of] systems", for the just and equitable conservation of biodiversity. Transformative conservation is an expansion on transformative change, a concept put forth by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in the transformative change assessment (IPBES, 2025). Transformative change calls for overall "system-wide shifts in views, structures and practices" (IPBES, 2025), and while it shows promise, ideas of transformation remain vague, thus Fougères et al. (2022) propose six recommendations to counter potential "oversimplification or overcomplication" of the concept. Transformative change is said to lack a focus on power relations and politicisation of biodiversity conservation debates (Fougères et al., 2022). Conservation must become politicised, as humans and nature no longer exist in separate spheres in the Anthropocene (Massarella et al., 2021).

Aims and objectives

The objective of this Capstone thesis is to explore, analyse and critically assess the potential of transformative conservation for human-wolf coexistence in the Netherlands based on the Wolvenplan 2025. With this aim, the recommendations for transformative conservation laid out by Fougères et al. (2022) will be used as the conceptual framework guiding the assessment. This research is relevant as the Wolvenplan was published only recently (April 2025) so its implementation has yet to be analysed. The recommendations for transformative conservation allow for a new perspective to be brought into the discourse and to evaluate the Wolvenplan in a critical and holistic way. Specifically, the research question of this thesis is

What is the potential of transformative conservation for human-wolf coexistence in the Netherlands based on the Wolvenplan 2025?

Literature review

Wolf ecology

The wolf is a keystone species and apex predator within its ecosystem (Eisenberg, 2013). This means that its presence and behaviour exerts successive effects, or "*trophic cascades*" on other species within the ecosystem, i.e. an increase in the number of wolves would lead to a subsequent decrease in prey or competitor species (Mills et al., 1993; Eisenberg, 2013). When apex predator numbers decrease, 'mesopredator release' may occur, the rise of many smaller (meso)predators in an ecosystem, altering and likely reducing overall biodiversity through higher predation pressure (Wallach et al., 2015). In a natural landscape with minimal anthropogenic disturbance, wolves have the capacity to increase levels of biodiversity because of their relation to other species in its ecosystem (Eisenberg, 2013). Wolves' natural prey includes wild ungulates such as red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*) and wild boar (*Sus scrofa*). The presence of wolves, their hunting behaviour and their vocalisation (howling) garner fear among wild ungulates (Kuijper et al., 2015; Widén et al., 2022). Wild ungulates cause damage to crops and forests by their grazing and browsing (feeding on lower branches and young shoots) practices (Kuijper et al., 2024). In Yellowstone National Park, USA, aspen tree (*Populus tremuloides*) growth was found to have increased in the years after wolf reintroduction (Ripple & Beschta, 2011). More wolf numbers meant less elk and deer species browsing on willow (*Salix spp.*) trees as well, leading to an increase in the numbers of beavers (*Castor fiber*). Beavers have important roles concerning the hydrology of rivers, which means that the reintroduction of wolves in Yellowstone indirectly influenced the course of rivers (Ripple & Beschta, 2011). These are examples of the powerful and beneficial trophic cascades that wolves might trigger in a natural environment.

How do anthropogenic landscapes alter the effects caused by wolf presence? The Netherlands has very little to no completely wild areas left; only 26% of the country is protected for nature (CLO, 2024) while 63% of the country's ecosystems are categorised as "agroecosystems" (BISE, 2019; EEA, 2019). As the Netherlands is a heavily human-dominated landscape there are limited options for how much the wolf can initiate trophic cascades and increase biodiversity due to the novel interactions for wolves that arise, such as increased interactions with livestock and domesticated animals (Kuijper et al., 2024). Because human activities can decrease wolf numbers by vehicle collisions, (il)legal hunting or disturbance, wolves likely cannot reach adequate numbers required to initiate trophic cascades (Kuijper et al., 2016). As of May 2025, there have been 49 confirmed wolf deaths in the Netherlands due to vehicle collisions since 2017 (BIJ12, 2025a). To put this number into context, in 2024 the total number of (live) wolves in the Netherlands was estimated to be about 100[1] (including adults, pups, yearlings and wandering wolves, i.e. who don't belong to an established pack) (BIJ12, 2025c).

Wolf behaviour and diet

Wolves' primary diet consists mostly of ungulates, supplemented by smaller mammals such as hares or rodents such as mice (Jansman et al., 2021a; Mowat, 1963). The main factors influencing wolves' diet are the availability and vulnerability of prey, i.e. the abundance of prey species in areas close to wolf packs and how easy it is to hunt them. Their hunting techniques generally entail patience and endurance rather than brute strength: wolves usually hunt by tiring out their prey as a result of a long chase, spanning many kilometres (Jansman et al., 2021a). Consequently, they predominantly prey on weak and sick animals that they single out from respective herds. As of yet, there is no comprehensive study conducted in the Netherlands that

[1] This number is not certain because of the wolf's capacity to travel far distances over a short period of time (BIJ12, 2025c). Wolves in the Netherlands are not GPS monitored, as this is a violation of Annex IV in Council Directive 92/43/EEC; prohibiting all forms of deliberate capture.

confirms the wolf's exact diet, however studies done in Belgium and Germany can be used as a reference point due to the similarity in landscape and climate. Livestock contributed to only 1,6% of the wolf diet in Saxony, Germany, and 12,9% in Flanders, Belgium (Jansman et al., 2021a). A recent study conducted in the Warta River Mouth in western Poland found that domesticated animals consisted of 3% of wolves' diet (Baranowska et al., 2025).

Predation on livestock

Wolves do not differentiate between wild and domesticated ungulates (Jansman et al., 2021a). The case of wolf establishment in the Netherlands is unique, due to the country's high human and livestock density, which, combined with inefficient livestock protection measures lead to an increase in the predation of livestock (Jansman, 2021; Jansman et al., 2021a). Attacks on livestock are "context-dependent", dependent on factors such as farmer knowledge about prevention strategies, availability of other prey species and wolf pack stability, which have been confirmed by multiples studies in the past (Baranowska et al., 2025; Durá-Alemañ et al., 2024; Fabbri et al., 2018; Janeiro-Otero et al., 2020;).

In the Netherlands, the wolves that predate on livestock, sheep in particular, are usually wandering wolves, not those in established packs (Jansman et al., 2021a). Wolves that have previously predated on livestock are more likely to repeat this, since wolves exhibit taught behaviour and behavioural conditioning: either from parent wolves or as a result of habituation to humans; they learn to associate a positive or negative consequence with a behaviour (Jansman et al., 2021a). Therefore, if a (wandering) wolf learns to associate a positive outcome (high prey vulnerability and availability) with preying on livestock, it is more likely to repeat this behaviour in the future. Adequate protection of livestock that conforms with national norms is of utmost importance, as captive livestock in closed fields cannot run away, which would be their natural instinct (Jansman et al., 2021a). This is related with a phenomenon called

“surplus-killing”: the excessive killing of prey, seen in almost all carnivores (Kruuk, 1972). Surplus-killing is usually done as a result of killing prey for consumption at a later point (Jansman et al., 2021a). As sheep cannot act on their natural instincts, surplus-killing is more likely. Between the wolf’s comeback and establishment in 2015 and 2023, there have been 709 reports of confirmed livestock damage by wolves (IPO, 2025). On average, that is 101 reports per year. Sheep make up more than 90% of these damages, followed by other animals such as cattle, equids and goats, in much smaller percentages (IPO, 2025). As a reference point, in 2021 there were 850,000 sheep in the Netherlands (CBS, 2022), and 672,380 sheep were slaughtered for meat in the same year (Food and Agriculture Organization of the United Nations, 2025).

Livestock protective measures

In the Netherlands, the 2 most common measures for protecting livestock are electric fencing that aligns with country norms for compensation eligibility and the introduction of a guard dog. The electric fencing needs to be in line with the norms provided by the ‘Faunaschade Preventiekit’ by BIJ12 [Translation: “*Fauna Damage Prevention Kit”*]. There is a minimum voltage required (4,5kV) as well as a minimum and maximum distance from the top and bottom to the ground, because wolves have a tendency to crawl under fences rather than jump over them (BIJ12, 2025b). Electric fencing seems to prove most effective based on a study conducted by Bruns et al. (2019). In the Netherlands, these conditions laid out by BIJ12 have to be met before a farmer is eligible for compensation from the government, if confirmed (by DNA testing) damages were to occur by a wolf (IPO, 2025). Public hunting is not an effective protective measure; a study conducted in Slovakia found no trend between numbers of wolves killed and overall livestock losses (Kutal et al., 2023).

Reflecting on the term coexistence

The International Union for Conservation of Nature (IUCN) defines human-wildlife conflict as “struggles that emerge when the presence or behaviour of wildlife poses … [a] … threat to human interests or needs, leading to disagreements … [and] … negative impacts on people and/or wildlife” (IUCN, 2020). In the current discourse, some propose a framing of human-wildlife coexistence rather than conflict, because coexistence is not inherently positively or negatively connotative (Marchini et al., 2021). Marchini et al. also admit that the term coexistence can be vague, however they believe that it is a solid basis to map situations of living together between humans and various species. They created a conceptual framework (Figure 1) whereby one can map the current situation of coexistence, with different quadrants based on the impacts that the situation or activity(ies) is having on which actor, e.g. negative or positive impact. The ideal goal is ‘convivial coexistence’, or *convivencia*, described by Marchini et al. as “...sharing the space [and] mutually benefiting from the interaction, even if the benefit is intangible”. The term human-wildlife interactions (HWIs) can also be used as a more general, or all-encompassing term. IUCN also states that human-wildlife conflict never occurs in a vacuum; there are always multiple stakeholders and actors with varying political views, the conflict often touches more people than it seems, and there are “underlying social, cultural and economic contexts” (IUCN, 2020). The term human-wildlife coexistence will be used in this thesis, to assert that coexistence can involve both negative and positive interactions.

Methodology

Prior to narrowing down the research question, informal dialogues were held with experts within the wolf ecology and behaviour field to gather insights on the current human-wolf landscape in lowland countries. Moreover, a short visit was made to Den Treek, for the author to immerse herself in an area where wolves have established themselves [“*Wolvenleefgebied*”]

and observe any guidelines concerning human-wolf interactions (Figure 6)[2]. An exploratory narrative literature review was conducted using databases such as Google Scholar and the University of Groningen online library database to gain an understanding of the background of the wolf situation in the Netherlands. A literature review on human-wildlife coexistence and innovative methods of assessing conservation was also carried out to identify the frameworks to be used in this thesis. Grey literature (non-academic sources) such as news outlets and posts on Facebook and Linkedin were also used to inform about the general public perception of wolves and human-wolf coexistence prior to conducting the analysis.

Coexistence mapping: conceptual framework

Based on the Wolvenplan (IPO, 2025), the conceptual framework proposed by Marchini et al. (2021) was used to map the current situation as well as the ideal transformative potential of "*convivencia*" portrayed by arrows showing "where we are" and "where we want to get". Their framework consists of a graphical representation of the wildlife and human axes. The graph includes four 'conditions' of coexistence, each shown by its respective quadrant. The x-axis represents the species of conservation concern and the y-axis shows the severity of the relevant social problems. The bottom left quadrant portrays human-wildlife interactions (HWIs) that are negative for both humans and the affected wildlife, e..g vehicle collisions. The top left shows HWIs that are negative for wildlife but positive for (some) humans, e.g. poaching. Bottom right shows HWIs that are positive for wildlife but negative for humans, e.g.'nuisance' wildlife. Finally, the top right quadrant showcases ideal coexistence, or "*convivencia*": HWIs that are positive for both humans and wildlife (Marchini et al., 2021) (Figure 1). Since "convivencia" is difficult to define and less realistic, objectives within wildlife conservation often aim to move as close as possible to this quadrant while keeping in mind limited resources such as time and funding. The map is a useful visual tool used to "inform the current situation and desired

[2] Unfortunately no wolves were spotted.

changes within a specific timeframe" (Marchini et al., 2021). The benefit of such a map is the possibility of including communities affected by the wildlife conflicts in human-dominated landscapes for future decision and policymaking. The map based on the Wolvenplan (Figure 2) was digitally created based on the author's assessment and evaluation of the Wolvenplan and the exploratory literature review of the situation in the Netherlands.

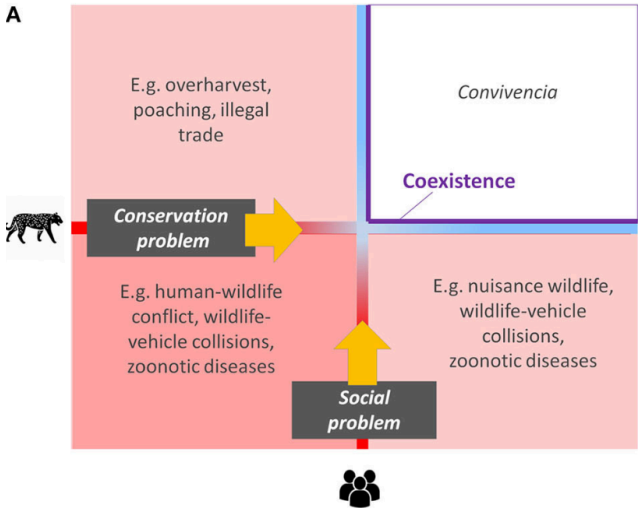

Figure 1: Conceptual framework for describing human-wildlife interactions proposed by Marchini et al., 2021.

Transformative conservation framework

Fougères et al. (2022) suggest 6 recommendations for "facilitating transformative conservation". These are 1) Take a systems approach to transformation 2) Partner with political movements to achieve equitable and just transformation 3) Link societal with personal ('inner') transformation, 4) Update how we plan for transformation, 5) Facilitate shifts from diagnosis and planning to transformative action and finally 6) Improve the ability to adjust to transformation as it occurs. These recommendations will be used as a lens through which to assess Wolvenplan 2025, by analysing to what extent the recommendations are already integrated in the IPO's plan and how they could be incorporated to improve coexistence.

Stakeholder analysis

Stakeholder analysis is a useful tool to understand the role of different actors in the decision making process, and an analysis of stakeholder interests and influence is generally effective for the development of policies and plans (Brugha & Varvasovszky, 2000). For this thesis, a stakeholder analysis was carried out using different maps. One based on a reconstruction of Figure 4 by Kuijper et al. (2024) to include how the different human and non-human actors were mentioned and included in the Wolvenplan (Figure 5) and an influence-involvement matrix (Figure 7). The matrix was based on the method used by Oluoch et al. (2018), who used such a matrix to analyse the importance of stakeholders within the context of neonatal nursing policy implementation in Kenya. The matrix created by Oluoch et al. (2018) was a product of qualitative data collection, including document review and stakeholder feedback. Mapping out stakeholder influence and interest/involvement allows for stakeholder prioritisation, a method to more effectively apply relevant actions to each stakeholder (Mints & Kamyshnykova, 2019). In this thesis, stakeholder analysis aims to answer the question “Who are the actors involved in the Wolvenplan?” in order to apply the recommendations by Fougères et al. (2022) more effectively.

Results

Coexistence map

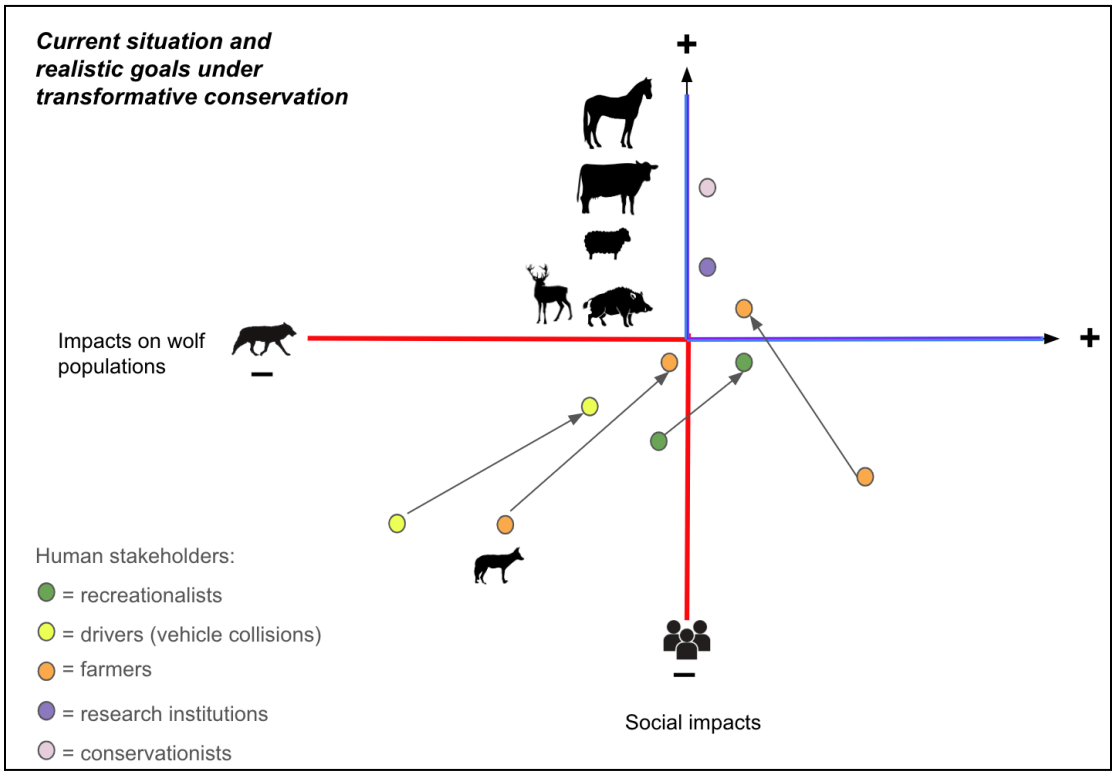

Figure 2: Map of the current and ideal conservation of wolves in the Netherlands based on the Marchini et al. (2021) conceptual framework (created by author).

Figure 2 showcases human-wolf coexistence in the Netherlands portrayed by circles depicting human stakeholders and figures depicting non-human (animal) stakeholders. The circle at the beginning of the arrow represents what the situation is like in the current landscape, and the arrow points to the ideal situation, or near-ideal, as it is difficult to achieve complete "*convivencia"* where both humans and wolves will mutually benefit from the interactions with each other (Marchini et al., 2021). The map includes other species that are involved as non-human stakeholders. These animals are the jackal, deer, wild boar, and farm animals (sheep, cattle, horses). The jackal's predation on sheep causes the wolf to occasionally be named as the wrong culprit (IPO, 2025). The jackal is in the double negative quadrant because

its behaviour has negative consequences both for the wolf (if it gets wrongly blamed) and for farmers specifically if their livestock is attacked. Natural prey of the wolf (deer and wild boar) are also represented. Their behaviour has a positive impact on the wolf as they provide a source of food, but they are not in positive coexistence with humans because they could be hunted. The farm animals are in the top left quadrant (negative for the wolf, positive for the human) because their existence can have both a negative and positive effect on the wolf. In the short term, they are positive for the wolf because they can be a source of food, but in the long term they pose a threat to how the wolf will be perceived by the public, which can affect the wolf's livelihood if it is deemed a "problem wolf" (IPO, 2025). The existence of farm animals are largely positive for the human stakeholders because they provide economic or social benefits.

As for the human stakeholders, recreationalists are currently situated in the quadrant where interactions are negative for both the wolves and recreationalists. This is due to increasing reports of wolves showcasing unnatural and undesirable behaviour and causing incidents with recreationalists (Van Bommel & Schumacher, 2025). Through applying recommendations for transformative conservation, it should be possible for incidents to be reduced, by implementing stricter guidelines to respect wolves in their habitats (Figure 3), therefore the green circle moves closer to the positive situation for both wolves and people. Farmers have different relationships with wolves depending on whether the wolf is considered a "problem wolf" or not. "Problem wolves" are mapped in the bottom right quadrant ('nuisance wildlife'), however farmers are also mapped in the double negative quadrant because interactions can be negative for the wolves as well, explained in the previous paragraph regarding the position of the farm animals in the map. Vehicle collisions accounted for 49 wolf deaths since 2017 (BIJ12, 2025a), so these are quite negative for both people and wolves, as it can bring the driver of the vehicle in physical danger or cause emotional trauma. This relationship could be improved by the implementation of wildlife corridors (Huijser, 2016), which would shift the position of these stakeholders more positively. The research institutions and

conservationists are in more positive stages, both currently and in the future. For research institutions, this is because the wolf's existence is beneficial for them as there is more to research, while their work in turn has positive effects for the wolf, as results from scientific research can inform policies that can protect the wolf and other species. Conservationists work towards protection of the wolf, therefore they are in a more positive coexistence than other human stakeholders.

Figure 3: Guidelines for people entering wolf habitat (author's own).

Recommendations for facilitating transformative conservation

Recommendation 1: Take a systems approach to transformation

Fougères et al. (2022) state that transformative conservation requires a soft systems approach, to avoid oversimplification of the issue. The conceptualisation of a soft system can be traced back to Peter Checkland, who coined the term "Soft Systems Methodology" in 1981. In a soft system, inquiry is at the centre, there are no fixed or permanent solutions, and the primary aim is a learning process as opposed to an "optimising" process in a hard system (Checkland,

1989). For transformative conservation, the human-wolf landscape in the Netherlands should be seen as a living system, i.e. one that is self-organising and able to adapt to external drivers and internal processes (Fougères et al., 2022). People and the environment exist in an evolving, dynamic relationship where each is interdependent on the other, generally understood through a social-ecological systems (SES) framework (Biggs et al., 2015). The Wolvenplan does not explicitly name the type of system used in the management of human-wolf coexistence, however their intervention guidelines can be viewed as their main output, which are highly objective-based (where the objective is to protect people, domestic dogs and livestock) rather than understanding-based (IPO, 2022). The benefits of using a soft system approach would be to understand the core problem for more sustainable management (Fougères et al., 2022). The core problem in the Netherlands is that a peaceful coexistence is yet to have been reached between people and wolves (IPO, 2025). The first step to understand the interaction between components in the system is a resilience assessment (Fougères et al., 2022). This can take the shape of various research methods, involving both social data such as participatory data collection or the collection of ecological field data (Quinlan et al., 2021).

Wolvenplan resilience assessment

In the case of the Wolvenplan, the equivalent to a resilience assessment was conducted in the form of two “fact finding” studies (Jansman et al., 2021a; Lammertsma et al., 2024) to inform the background sections about wolf behaviour and ecology as well as a legal analysis (Boerema et al., 2021) to inform the section on Legal Aspects (“*Juridische aspecten”*). The study by Lammertsma et al. was conducted about the golden jackal (*Canis aureus*) in the Netherlands at the request of the LVVN to analyse whether certain presupposed wolf damages were in fact caused by the jackal, because it shows similar behaviour to the wolf. In this case, we could interpret these fact finding studies to be a start of an assessment of other system components, i.e. wolf and jackal behaviour (two actors in the feedback loops). The Wolvenplan

is missing a complete systems map identifying all stakeholders, therefore it only partly complies with Recommendation 1.

Systems mapping

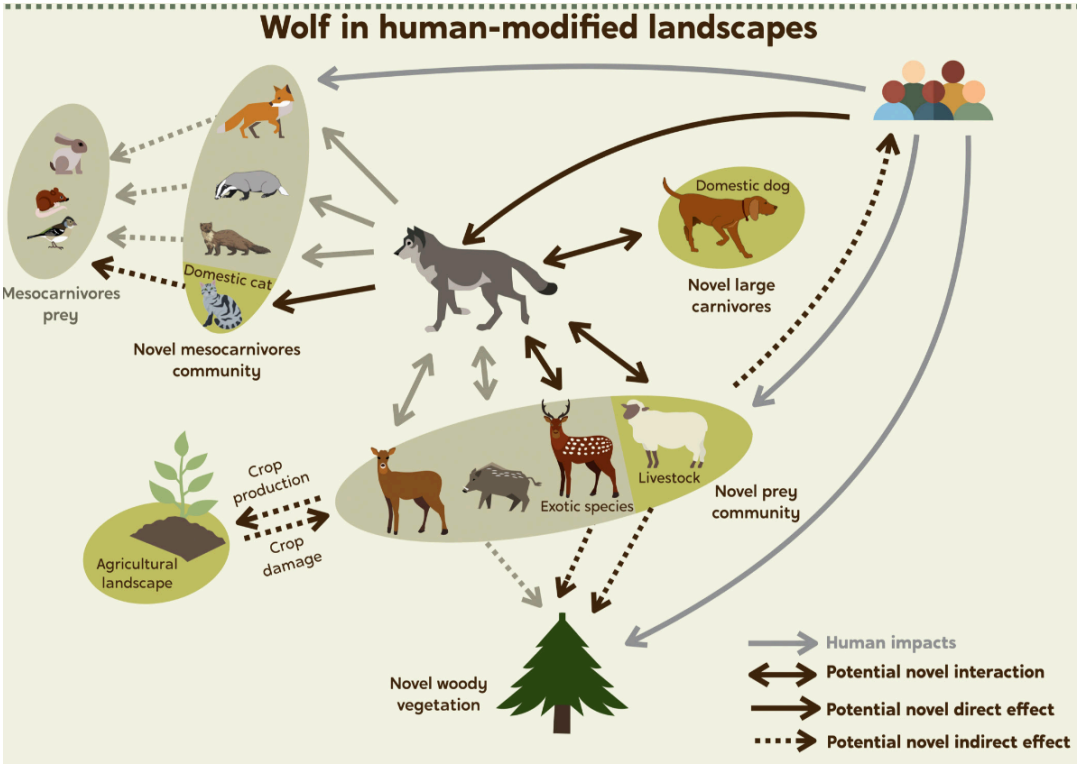

Figure 4: Map of the potential novel interactions of the wolf in a human-modified landscape (Kuijper et al., 2024).

Kuijper et al. (2024) conducted research to understand how a human-modified landscape changes the interactions that arise as a result of the presence of the wolf. Figure 4 visualises the ecological components of the system. While this study was conducted within the context of a European landscape, it is not specific to the Netherlands and therefore results and interactions may differ. This map was used to create Figure 5, a representation of systems map based on Wolvenplan 2025.

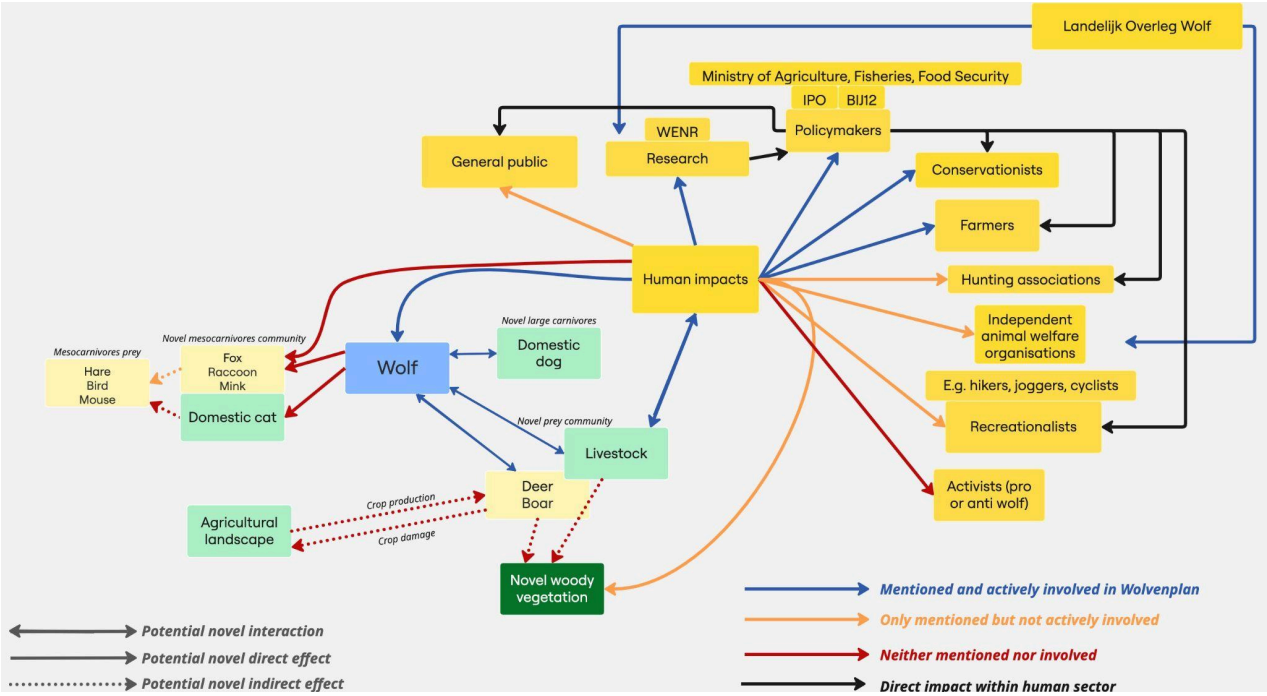

Figure 5: A reconstruction of the ecological interactions map used to visualise the inclusion of human and non-human actors in the Wolvenplan (created by author based on Kuijper et al., 2024).

Figure 5 showcases the interactions between human and non-human stakeholders mentioned by the Wolvenplan, and to what extent they are included in the plan. The Landelijk Overleg Wolf (LOW) is an umbrella organisation including many different groups and organisations, depicted in Figure 5. LOW's proceedings were used as input for the Wolvenplan, so most of the organisations are considered to be 'actively involved', barring hunting associations and animal welfare organisations, who are not explicitly stated to have a role in creating the policies for managing human-wolf coexistence (IPO, 2025). The research conducted by institutions such as Wageningen Environmental Research (WENR) directly influences policymakers as the findings from studies form a basis of recommendations for changes in policies and laws. The acts of policymakers influence the rest of the human stakeholders, from the knowledge that the general public has to the compensation of the

farmers to the rights of recreationalists (i.e. when they are allowed to enter national parks). Identifying the different actors in the system allows them to be given agency, empowerment and involvement in decision making. In this case, the definition for agency is *"the ability to take action or to choose what action to take"* (Cambridge Dictionary, 2025), so in the case of the Wolvenplan, the stakeholders whose decisions directly translate to action have agency. Acknowledging the power relations involved in nature conservation is an important step in the next recommendation by Fougères et al. (2022), for the goal of achieving equitable and just transformation. As seen in Figure 5, policymakers and the LVVN specifically have the most agency, and thus, power, out of the human actors in the context of the Wolvenplan. Therefore, critical reflection on the position of those in power may facilitate the identification and tackling of potential biases in the decisions made. Decisions made by the policymakers influence the other actors, who all directly or indirectly affect the wolf and the rest of the ecosystem.

The Wolvenplan does not provide much attention to phenomena such as mesopredator release (Wallach et al., 2015) or the interactions that have an effect on vegetation. Incorporating these interactions would allow for a more holistic and inclusive policy approach.

Recommendation 2: Partner with political movements to achieve equitable and just transformation

The second recommendation, partnering with political movements, is to emphasise that conservation never exists in a political vacuum. Questions that can be asked to kickstart the process for Recommendation 2 are "Transformation of what, into what? And for and by whom?" (Meerow & Newell, 2019). In the case of wolf conservation in the Netherlands, the "what" is the transformation of public perception regarding the wolf (a *reframing* of the problem), "into" a harmonious, equitable and just coexistence, or a state close to "*convivencia*" (Marchini et al., 2021). This would ideally be done "for" all human and non-human actors in the system, "by" the stakeholders with the most agency. The inclusion of political movements, or public mobilisation,

would be facilitative in this instance because it would allow for a cessation of the funding of harmful activities such as permits for hunting, for public education and to bring about changes in legal status that advocate for more equitable coexistence.

Political and legal actors in Wolvenplan 2025

The Wolvenplan does not include any political movements as part of their "collaborating organisations" (IPO, 2025). The organisations mentioned are the provinces, the LVVN, the LOW and other smaller working groups such as individual municipalities (IPO, 2025). If a wolf exhibits behaviour that is deemed acutely and directly life threatening to humans, a municipal mayor may call for direct intervention, or the police may also take a legal role if they are a direct witness to such a life threatening situation caused by wolf behaviour (IPO, 2025). As mentioned previously, the actors with the highest agency in the Wolvenplan are the policymakers. Their decisions, specifically concerning funding and policy or law enforcement, affect almost all other stakeholders and components in the system (Figure 5). The legal frameworks concerning wolves in the Netherlands reflect multiple levels: internationally at the European level (e.g. Bern Convention) and nationally either at the provincial or municipal level (IPO, 2025). The conservation of nature in the Netherlands is generally protected under the Environment Act ["*Omgevingswet*"], which prohibits the disturbance, transportation and deliberate killing of wolves without a permit ["*omgevingsvergunning*"] (IPO, 2025). In abnormal cases, such a permit may be granted to remove or cull a wolf from its pack, when certain criteria are met. These criteria are: disruption of public safety or health, prevention of significant damage to crops, livestock, and general flora and fauna, or research and education purposes (IPO, 2025). It is important to note that the granting of such a permit should not affect the 'favourable conservation status' ["*Gunstige Staat van Instandhouding*"] of the wolf, and that a permit is only granted in situations where there are no other possible alternatives (IPO, 2025). Such a permit

may be granted by relevant authorities ["*bevoegd gezag*'], usually provincial or government administrations (IPO, 2025).

As the wolf is listed in Annex II of the EU Habitats Directive (Council Directive 92/43/EEC), it is considered a species requiring a designated area of conservation (European Commission, 1992). The protected area forms part of the Natura 2000 network, an overarching network of all EU-protected nature sites (European Commission, 2025c). Concerning who manages interactions on a Natura 2000 site, the European Commission is vague and states that "*it is important that landowners and site managers work together to find local solutions to best manage the sites*" (European Commission, 2025c). In the Netherlands, the LVVN has jurisdiction over the designation of Natura 2000 areas, and their policy states that such an area may only be designated once the protected species has established itself for a period of 10 consecutive years, which start from the first confirmed reproduction. For the wolf population in the Netherlands, this was 2019, so the species would qualify for Natura 2000 habitat in 2029 (IPO, 2025). The LVVN is also required to take EU recommendations and the latest scientific findings into account to keep their decision up to date (IPO, 2025). Through this policy, it is clear that the stakeholder with the most agency and influence in the Wolvenplan is the LVVN.

Recommendation 3: Link societal with personal ('inner') transformation

'Inner transformation' is meant to mobilise change through a process of self-discovery and reflection (Fougères et al., 2022). One way to foster change is to challenge people's "beliefs, values, worldviews, identity, interests, loyalties, ethics, and routine behaviors" (Fougères et al., 2022; O'Brien, 2012). O'Brien (2012) writes about the need for a shift from adapting to change to creating actual change, through the mobilisation of individual and collective power. An example is the Inner Development Goals framework (IDGs), aimed at "creating outer growth from inner change" (Ankrah et al., 2023).

This recommendation works towards a critical reframing of the human perception of nature, which Fougères et al. believe to have the most impact in societies where the main economic model is centred around growth, like in the Netherlands (CPB, 2025). In the Netherlands, the economy is set for moderate growth in the next few years (CPB, 2025). This reframing is backed by Turnhout (2024) who states that the separation of humans and nature is a catalyst for “exploitation and environmental destruction”. Therefore, the need to implement steps toward inner transformation is relevant for conservation as it would tackle the appropriate systems, which are interconnected.

Actionable ways to work towards inner transformation for improved coexistence include anticipatory learning, social advocacy, and participatory action research (PAR) (Fougères et al., 2022). Action research involves simultaneously taking action while conducting research, and PAR is a process of community involvement in action research (Lloyd-Evans et al., 2023). This involves the practical implementation of research findings, either short or long term. Naturally this requires adequate time, funding and a motivated group of people. An example of using community engagement in wildlife conservation to work towards understanding coexistence is the research conducted by Marchini et al. (2021). In their qualitative research, workshops were conducted to plan for human-jaguar coexistence in Brazil, where steps such as a situation assessment, goal setting, system mapping, identifying “leverage points”, and producing a monitoring/evaluation framework were introduced to stakeholders. These workshops were guided by results from surveys conducted with local stakeholders (Marchini et al., 2021). While these workshops did not engage directly with local community members, this is a recommendation that can be applied to different contexts.

The Wolvenplan does very little reflecting on one’s inner journey or the relationship that people have with nature, only that people’s safety is considered to be the top priority (IPO, 2025). The IPO does recognise the importance of public education concerning wolf behaviour as well as human behaviour in proximity of a wolf (Figure 3), but this could be improved to

become community learning processes. Human influence is one of the factors which disturb the wolf and can alter its behaviour, so it is important for the safety of both humans and wolves that people know how to act and try to keep disturbance to a minimum. While the Wolvenplan affirms the need for transparent and reliable information concerning the wolf, the IPO has yet to implement a national information point where people can find the answers to frequently asked questions (FAQs) or misconceptions that may arise. While there is a section with FAQs on the *Wolf* page of the BIJ12 website (BIJ12, 2025c), the need for a public communication strategy that incorporates values of inner transformation as well as action points is important. In the Wolvenplan, IPO recommends that more of a focus should be placed on public communication and the role of education for better coexistence (IPO, 2025). Incorporating values of inner transformation provides more agency to public stakeholders. Accessible tools for self-reflection are a starting point to address the negative perception of the wolf in the Netherlands. A process of unlearning is needed (Fougères et al., 2025). This can start as early as shifting the antagonist in children's stories: no more 'big bad wolf' (Ghosh, 2014).

The section on coexistence in the Wolvenplan (Section 4, "*Samenleven met Wolven*") mainly covers livestock damages and the economic impacts of wolf interactions. While these are important and relevant for the management of wolf conservation, a shift to considering relational and non-materialistic values would work towards a more holistic approach to conservation that is in line with inner transformation (Fougères et al., 2022). Relational values refer to values attributed to interactions between humans and their natural environment (Campbell & Gurney, 2024). The Wolvenplan categorises certain wolf behaviour as undesirable, which will be elaborated upon in the following sections concerning the intervention guidelines. While the Wolvenplan states that behaviour such as livestock predation or wolves approaching human-dominated neighbourhoods is not necessarily unnatural and is likely a reaction to the degree of human disturbance, the labelling of certain behaviours as positive or negative engages certain narratives about the wolf, which can affect its conservation and heavily affect

coexistence. A study in Germany found that the preference of certain management practices depended on the stakeholders' personal narratives (Jürgens et al., 2023). Thus, narratives and value shifts influence policies and should be seriously considered at the policymaking level.

Recommendation 4: Update how we plan for transformation

Fougères et al. (2022) emphasise the need for scenario planning to reframe and "recraft biodiversity narratives". Fougères et al. further explain the benefits of using assumption-based planning, which considers the assumptions and uncertainties contributing to decisions (i.e. what are the presumptions, and what could happen in the future if they turned out to be false) (Fougères et al., 2022). Assumption-based planning provides more flexibility for goal setting and the creation of an action plan.

Gedrag wolf		Oorzaak	Inschatting	Maatregel en doel	Situatie
e	**Wolf benadert actief en bewust meermaals mensen binnen 30 meter* en lijkt geïnteresseerd in mensen.**	Divers: Mogelijk sterke voedsel-conditionering en gewenning. Hond kan een trigger zijn.	Kritieke situatie Kans op gewenning en uiteindelijk agressief gedrag en letsel mens.	Aanwezigen bespreken met hulpdiensten of hun inzet nodig is. Maatregelen verantwoordelijke provincie of burgemeester: • opsporen en vergunningsverleningstraject voor verjaging (actieve afschrikking); • publiek waarschuwen niet te voeren; • situatie monitoren; • eventueel gebied (tijdelijk) afsluiten voor bezoekers.	Probleemsituatie
			Als provincie of burgemeester in overleg met deskundigen vaststelt dat aversieve conditionering niet werkt of praktisch niet uitvoerbaar is: 'probleemwolf'.	Aanwezigen schakelen hulpdiensten in indien nodig. Maatregelen verantwoordelijke provincie of burgemeester: • vergunningverleningstraject om probleemwolf uit de populatie te verwijderen; • situatie monitoren; • indien fysiek contact: DNA-afname en -analyse. **Doel**: voorkomen nieuwe incidenten, behouden openbare veiligheid. Bij acute veiligheidssituatie wolf doden op last burgemeester, op grond van de Gemeentewet.	Probleemwolf
f	**Wolf reageert defensief (passief agressief) op mensen bij verstoring (bijvoorbeeld tijdens eten van prooi) en vlucht niet meteen of doet schijnaanvallen, zonder mensen gericht te benaderen.**	Normaal gedrag Afhankelijk van karakter-eigenschappen individu. Verdediging van prooi.	Gevaarlijk	Publiek waarschuwen om niet in de buurt van de wolf te komen. Voor incidenteel verjagen van eigen terrein door de rechthebbende is geen omgevingsvergunning nodig. Eventuele provinciale maatregelen: • publieksvoorlichting over voeren, lokken en benaderen.	Geen probleemsituatie

Figure 6: Excerpt of the wolf-human intervention guideline from Wolvenplan 2025 (IPO, 2025).

The intervention guidelines presented by the Wolvenplan can be interpreted as a method of scenario planning (Figure 6). These include different recommendations and policies based on

an escalation of possible situations involving the wolf. There are four different contexts (*wolf-human*, *wolf-dog*, *wolf-livestock*, and a *dead/injured wolf*) and three different scenarios indicated by the following colours: green for “No problem situation” [“*Geen probleemsituatie*”], orange for “Problem situation” [“*Probleemsituatie*”] and red for “Problem wolf” [“*Probleemwolf*”] (Figure 6). The guidelines offer suggestions of how to act and what measures to take depending on the severity of a situation, however the guidelines themselves are not an instrument of intervention, as permission from the province is required to act on the breaching of the wolf’s legal protected status (Recommendation 2 - Political and legal frameworks Wolvenplan 2025) (IPO, 2025). The primary aim of the guidelines is the prevention of undesirable conditioned wolf behaviour. As wolves are generally avoidant of humans (with some exceptions), it is people’s responsibility to maintain such avoidance (Jansman, 2021). Thus the guidelines aim to preserve a balance between human safety and stability of wolf populations.

Figure 6 depicts an example of an excerpt from the guideline for *wolf-human* interactions. Based on the behaviour of the specific wolf, a presumed cause of behaviour is given along with an evaluation of how dangerous the situation is perceived to be. Based on this evaluation, the appropriate action and applicable end goal is suggested in the outer right-hand column (Figure 6). The guidelines show how scenario planning is used in the Wolvenplan for coexistence between wolves and people (including domestic dogs and livestock, which fall under the human branch of society), thus (partly) fulfilling Recommendation 4.

Recommendation 5: Facilitate shifts from diagnosis and planning to transformative action

Transformative action is defined by Fougères et al. (2022) as “participation and the co-production of knowledge, building and leveraging political networks, and mobilizing collective action” by creating “transformative spaces” to increase learning and action for transformative conservation. They emphasise that policy frameworks in themselves are not action. This

recommendation brings into focus that many scientific institutions avoid incorporating the social and political layers into the discourse out of fear of losing credibility (Fougères et al., 2022). Prior to actors and networks taking transformative action, a stakeholder analysis is helpful to identify the level of agency and responsibility that each actor has in the current system. This analysis brings to light at which points in the system transformative action is more necessary. Transformative learning (e.g. participatory action research, see Recommendation 3) “fosters a sense of responsibility towards nature” (IPBES, 2025).

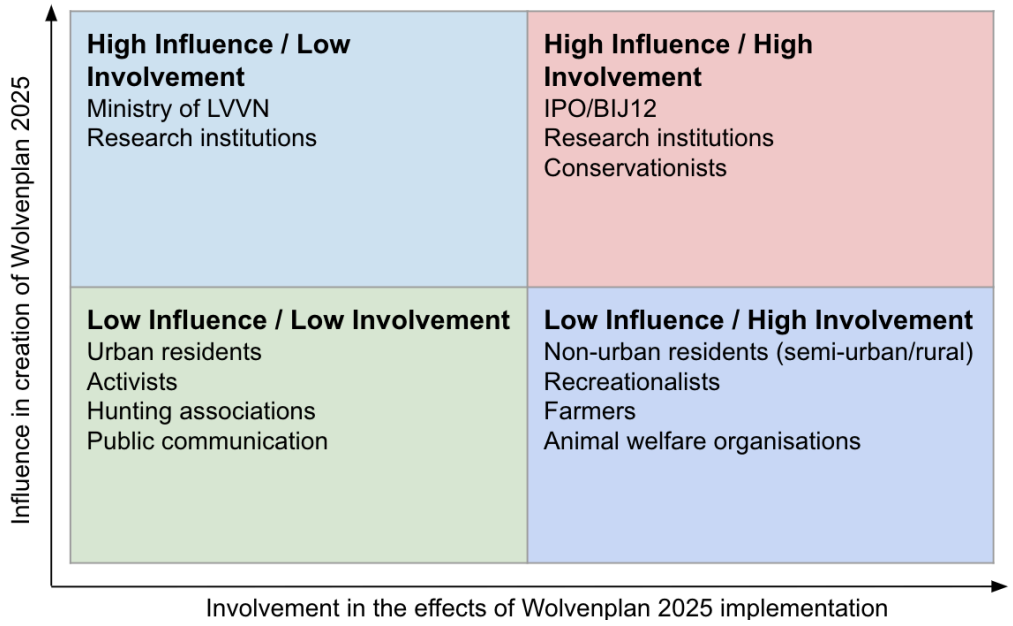

Figure 7: Matrix depicting influence and involvement of stakeholders in Wolvenplan 2025 (created by author based on Figure 3 in Oluoch et al., 2018).

Figure 7 portrays the influence and involvement of the Wolvenplan stakeholders which were identified by the author in Figures 2 and 5 above (see Coexistence map and Systems mapping sections). Influence pertains to a stakeholders’ ability to affect the creation and development of the Wolvenplan, and involvement refers to how much the stakeholder is affected by the implementation of the policies. Through this analysis, the relevant stakeholders are seen as active players in policymaking (Brugha & Varvasovszky, 2000). In the Netherlands, farmers

are responsible for the protection of their livestock (against wolves or jackals), however, the details of this responsibility are not specified by LVVN (IPO, 2025). Therefore, farmers lack agency because their responsibility has not been explicitly communicated. There are norms provided by BIJ12 in the form of the "*Faunaschade Preventiekit*" (see Literature Review; Livestock protective measures) (BIJ12, 2025b), where farmers are given information about what criteria to meet in order to qualify for government compensation should a wolf predate on their livestock (IPO, 2025). However, because they receive compensation for livestock damages, they are heavily affected by the proceedings of the Wolvenplan, hence why their position is one of 'high involvement' in the lower right quadrant of Figure 7. The role of the general public can be divided between urban and non-urban residents (Figure 7). In the Wolvenplan, research institutions such as the WENR can be understood to have high influence, involvement, agency and responsibility due to their connections to authority and funding. Their results influence the IPO, who drafted the Wolvenplan, showing high agency and influence of the WENR in the development of policies. Furthermore, research institutions can have either low or high involvement (the degree to which they are affected by the implementation of policies in the Wolvenplan), depending on whether they are funded by the relevant policymakers and the dissemination strategy of their research. In the case of the Wolvenplan, the fact finding studies were commissioned by the IPO and BIJ12, therefore the implementation of its policies and recommendations highly affects future research and human-wolf coexistence.

The Wolvenplan does not fulfil Recommendation 5, as the focus is still on diagnosis and planning rather than transformative action. The Netherlands is still in a transition period regarding how accustomed society is to the presence of wolves (IPO, 2025), so the focus is currently still an understanding of how to plan for coexistence rather than take transformative action.

Recommendation 6: Improve the ability to adjust to transformation as it occurs

The last recommendation suggests that in order to facilitate transformative conservation, “ongoing long-term monitoring of and engagement with the system to ascertain whether it is trending in the desired direction” is necessary (Fougères et al., 2022). This means that data collection and research studies need to be ongoing and continually adjusted. In the Netherlands, there is ongoing monitoring of wolf populations which allows policymakers to know when a revision of policies is necessary (IPO, 2025). The Wolvenplan 2025 was created as a follow-up of the ‘Monitoringplan Wolf’ (Klees et al., 2019). Within the Wolvenplan, it is also stated that any changes in laws will result in an updated plan and intervention guidelines (IPO, 2025). This shows partial fulfilment of Recommendation 6, as the policies are subject to change, however this change is not particularly concerning transformation of the system within human-wolf coexistence.

Consistent monitoring of the results of Wolvenplan policies are crucial for the coexistence of wolves, people and other animals. As mentioned in previous sections, certain policies in place are insufficiently effective at targeting relevant stakeholders for the implementation of transformative action and conservation, e.g. the lack of specificity surrounding protection of livestock and the current disqualification of the wolf habitat to be considered a Natura 2000 site (IPO, 2025). The future of nature conservation in the Netherlands is evolving, due to changing laws (European Parliament, 2025), narratives and landscapes, therefore continuous monitoring and adaptation of policies are necessary.

Discussion

Recommendation	Fulfilled in Wolvenplan? *(✓ = yes, X = no, ✓ / X = partially)*	Examples of feasible actions
1 Systems approach	✓ / X	Systems mapping to identify relevant stakeholders
2 Political movements	X	Reframe the problem and include public mobilisation
3 Inner transformation	X	Community engagement, participatory action research, collective learning
4 Update how we plan	✓ / X	Intervention guidelines
5 Shift to transformative action	X	Stakeholders to identify the areas to focus on for action
6 Ability to adjust	✓ / X	Monitoring of plan and policies

Table 1: A summary of which recommendations were achieved in the Wolvenplan and examples of actionable steps (created by author).

As seen in Table 1, 3 out of 6 recommendations by Fougères et al. (2022) were partially fulfilled by the Wolvenplan. These were Recommendations 1, 4 and 6. Recommendation 1 was partially fulfilled by the fact finding studies acting as a resilience assessment, but could benefit

from systems mapping and participatory research to identify crucial actors and involve their voices (Lloyd-Evans et al., 2023). Recommendation 2 could be improved upon if the social and political dimensions of the Wolvenplan were taken into account more, as a first step towards transformative action, a fulfilment of Recommendation 5. This shows how the recommendations are at times interconnected, and steps taken towards some will likely improve the other dimensions as well. An application of recommendation 4, “how we plan”, to the intervention guidelines could implement the inclusion of assumptions or uncertainty as one of the columns, i.e. a reasoning of why the cause of the wolf behaviour is believed to be so, and what would be an alternative action to take if the cause turns out to be false. The stakeholder analysis done throughout this paper using the recommendations as a starting point has shown that the involvement of farmers and the public could be improved by participatory action and communication as this would enhance feelings of empowerment. Such communication could take the form of a national information point (as mentioned in Recommendation 3), campaigns and educational programmes for farmers that include systems thinking could be used so that the farmers are well equipped and can protect their livestock more safely. Communication strategies and inclusive participatory research can raise awareness, which would allow stakeholders to feel more empowered (Lloyd-Evans et al., 2023).

In their transformative change assessment, the IPBES declares three underlying causes for biodiversity loss: “disconnection from and domination over nature and people”, "concentration of power and wealth”, and the “prioritisation of short-term, individual and material gains” (IPBES, 2025). All of these causes are applicable to the case of human-wolf coexistence in the Netherlands, as seen by the assessment conducted in this thesis. While the wolf’s presence in a wild ecosystem increases local biodiversity (Ripple & Beschta, 2011; Eisenberg, 2013), in most human-modified landscapes the wolf is unable to fulfil its ecological role (Kuijper et al., 2024). Levels of biodiversity in the Netherlands are much lower than the European or global counterparts, with a mean species abundance of 15% in the Netherlands (i.e. 15% of

what the species abundance would be in a natural situation) compared to 40% in Europe or 70% across the World in 2010 (CLO, 2016). The underlying causes for biodiversity loss are deep-rooted within society and may be difficult to overcome, hence the IPBES assessment also presents a list of challenges that create barriers against transformative change. The challenges most applicable to the case of human-wolf coexistence in the Netherlands are the “pervasive relations of domination” of humans over wolves and "inadequate policies and unfit institutions” (IPBES, 2025). This shows that strategic approaches should include a reframing of the problem and to reconsider why the wolf’s place in the ecosystem is questioned. Understanding human-wolf coexistence as a system will improve future planning while integrating the inevitable uncertainties that come with non-static wolf populations, evolving laws and changing policies. The recommendations for transformative conservation by Fougères et al. (2022) are important for achieving a more harmonious human-wolf coexistence in the Netherlands because they uphold the IPBES principles: “equity and justice”, “pluralism and inclusion”, “respectful and reciprocal human-nature relationships” and “adaptive learning and action” (IPBES, 2025). Change might seem radical, however as the systems of human domination (economic and environmental) are interconnected, a transformation of wildlife conservation could lead to more justice in society (Turnhout, 2024).

While the Wolvenplan overall uses neutral language concerning the wolf, there are some underlying tones that suggest more of a begrudging instead of enthusiastic acceptance of the wolf’s comeback (*“De wolf is nu eenmaal in ons land en daar zullen we mee moeten (leren) omgaan.”* Translation: *“That the wolf lives in our country is a fact we will have to (learn to) live with.”* (IPO, 2025)). A reframing and repositioning of language used would be a vital step to tackle the disconnection between nature and people (IPBES, 2025). The Wolvenplan has a people first approach, clearly laid out in the description of the intervention guidelines: *“De veiligheid van mensen staat voorop.”* [Translation: *“People’s safety comes first.”*] (IPO, 2025). Most of the guidelines uphold human safety as well as that of domesticated and/or farm

animals. The fact that nature conservation is a part of the ministry concerned with agriculture rather than the Ministry of Climate Policy and Green Growth or the Ministry of Education, Culture and Science is potentially biased and policies may reflect a favouring of agricultural or economic matters instead of prioritising the conservation of biodiversity. The overall goal of the Wolvenplan is to maintain the protection of the wolf while people understand the limits of coexistence and find a balance between society and nature, so it is not completely human-centred, however it is natural that agriculture is given more importance in a country like the Netherlands, based on what percentage of land is used for agriculture (63%) and what percentage is protected for nature (26%) (BISE, 2019).

Throughout this thesis the term “problem wolf” has been kept in quotation marks out of the belief that an animal cannot act out of pure malicious intent; for a wolf to intentionally cause harm, it would have to understand that the outcomes of its behaviour are wrong, which has not been confirmed (Heyes & Dickinson, 1990). The fact that the wolf cannot distinguish between domesticated and wild ungulates means that it is part of its natural behaviour to prey on the animals it comes across. However, the discourse on animal intent and behaviour is complex, slightly more philosophical and outside the scope of this thesis. In that case it could be seen as unfortunate for the wolf that it has made its recovery in heavily human-dominated countries such as the Netherlands, however strategies that advocate for the elimination of certain wolves will likely not make any difference, as the research by Kutal et al. (2023) suggests.

While it is unlikely that the comeback of the wolves in the Netherlands will have the same effects as it did on the ecology of Yellowstone, this thesis argues that society should nevertheless appreciate and respect their position in the ecosystem. An ever-changing world requires dynamic and flexible policies which are inclusive and future-thinking. These policies can be achieved through a radical restructuring of the way we think, plan and act for conservation (Fougères et al., 2022). Interdisciplinary research and critical social science pave new ways to act for just and equitable conservation (Massarella et al., 2021).

Limitations

As transformative change is an incredibly broad and all-encompassing topic, there were many aspects that were out of the scope of this Bachelor thesis. Not just transformative change is broad, but the human-wolf coexistence in the Netherlands involves a multitude of actors, participants and stakeholders who are all impacted by the policies of the Wolvenplan. It was not possible to analyse and include every detail of the Wolvenplan in this thesis, and as this paper was written in an interdisciplinary context it was not possible to go into full ecological detail, for example. The recommendations for transformative conservation are also not without critique. These and transformative change as a whole concept could be considered vague and idealistic (Fougères et al., 2022), however if they are used in combination with other methods and approaches they could add a more holistic perspective to issues within human-wildlife coexistence, as shown by the analysis in this thesis.

Future research and recommendations

The amount of money used for the compensation of wolf damages would be much more effective if it were used to implement the transformative conservation recommendations, create learning spaces for change, public mobilisation and a more holistic approach to protection for both wolves and people. The map by Marchini et al. can be used in workshops to allow relevant community members of the public to visualise the situations themselves, which will give communities and stakeholders agency and could motivate people to work towards a more positive coexistence.

Qualitative research that assesses the use and perception of transformative conservation recommendations in the context of human-wolf coexistence in the Netherlands would be useful to evaluate their potential on a more practical level. This could be done through engaging with stakeholders through workshops or interviews, thus increasing agency and empowerment (Oluoch et al., 2018; Marchini et al., 2021).

Another recommendation is the implementation of wildlife corridors near highways to reduce the number of wolves killed by vehicle collisions (Huijser et al., 2016). A growing area of interest in the human-wildlife coexistence discourse is the process of rewilding, the act of "returning a non-wild area back to the wild" (Corlett, 2016). This is an area with much potential for research to assess whether the theoretical claims have the same effects in practice.

Conclusion

This thesis focused on assessing human-wolf coexistence in the Netherlands by incorporating values of transformative change (IPBES, 2025). The Wolvenplan was used to exemplify coexistence at a policy level, created with the aim to find a balance between protection and management of wolf populations in the Netherlands. Firstly, a preliminary literature review was carried out to gain an understanding of the wolf situation in the Netherlands as well as different schools of thought within multispecies coexistence. Secondly, as transformative change is gaining traction in the field of critical social science (Massarella et al., 2021) and interdisciplinary work on conservation, the recommendations proposed by Fougères et al. (2022) were applied in the context of the Wolvenplan to assess to what extent the Wolvenplan was in line with these recommendations. Overall, 3 of the 6 recommendations were partially fulfilled in the Wolvenplan (Table 1). These were recommendations 1, 4 and 6. Different systems maps were applied and stakeholders were analysed to inform where policy recommendations could improve the state of coexistence. Lastly, this thesis went further on to critically reflect on why transformative change is urgently needed for biodiversity conservation in the Netherlands and how it could be realised in the context of the Wolvenplan with actionable examples. What is the potential of transformative conservation for the Wolvenplan? In its current state, the Wolvenplan shows little potential use for transformative conservation, however implementation of the recommendations could lead to a reframing of the conflicts between humans and wolves, leading to more equitable, just and sustainable coexistence.

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