

Healthy Shore, Healthy Seal, Happy Society

Understanding Human-Seal Coexistence on Green Beaches: A Case Study of De Kwade Hoek Beach, The Netherlands



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Abstract

Establishing and maintaining institutions for human-wildlife coexistence is complex when multiple policies and perceptions towards how humans should treat wildlife (i.e. human-wildlife conflicts) are involved. This study uncovers how stakeholders' perceptions regarding policies' social legitimacy shape the institutionalisation of Green Beaches as a meeting place for humans and seals. To achieve this, a review of the Seal Rehabilitation Agreement, Green Beach policy and temporary resting areas was conducted alongside semi-structured interviews with stakeholders encoded in these policies, using De Kwade Hoek Beach as a case study. The findings revealed the importance of looking beyond the beach studied and the elements encoded in policies to the underlying preferences for wildlife interactions and the unstated goals and strategies implied by them. They also suggest it is important to consider informal stakeholders, dogs and wildlife such as dune vegetation, birds, seal carcasses, not just live seals. It is concluded that the institutionalisation of human-seal coexistence on a Green Beach like de Kwade Hoek hinges on complex interconnections between four components: organisations, social legitimacy, rules (e.g. policies and laws) and enforcement. Accordingly, it is also concluded that excluding social legitimacy and entities beyond formal stakeholders and live seals in policies risks causing human-wildlife conflicts. This implies that legitimising human-seal coexistence on a Green Beach like De Kwade Hoek is a continuous process of addressing and integrating stakeholders' perceptions of how humans should treat wildlife into policies.

Keywords

Coexistence, human-wildlife conflict, seal rehabilitation, Green Beaches, institutions, policies, social legitimacy, stakeholders and wildlife

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Main Title

Permission granted by Pieterburen to use their slogan "Healthy Sea, Happy Seal" as inspiration

Cover Illustrations

© C. Hameeteman. (18 December 2022). *De Kwade Hoek Beach viewed from above.*

© C. Hameeteman. (5 January 2023). *A grey seal pup and its mother at Ouddorp Beach.*

In loving memory of my father,
Leo Derksen

he was an integral part of my thesis journey, steadfastly supporting me till its near completion.

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List of Abbreviations

1. English

TGB	The Green Beach eco-label
Green Beach	A beach carrying TGB eco-label
NLGO	Natuur- en Landschapsbescherming Goeree-Overflakkee Association
TRA	Temporary resting area
SRA	Seal Rehabilitation Agreement
SRF	Seal Rehabilitation Framework
SRC	Seal Rehabilitation Centre
MMRO	Marine Mammal Rescue Organisation
- EHBZ	Eerste Hulp bij Zeezoogdieren
- RTZ	ReddingsTeam Zeedieren
WAZ	Scientific Advisory Committee on Seal Rehabilitation
Wnb	Nature Conservation Act
WD	Animals Act
HWC	Human-wildlife conflict
HHC	Human-human conflict
CCT	Conservation Conflict Transformation
BOA	Special Investigating Officer
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CWH	Convention on the Conservation of European Wildlife and their Habitat
PD	Policy design
RRP	Responsibilities, roles and partnerships
SL	Social legitimacy
- IL	Input legitimacy
- OL	Output legitimacy

2. Nederlands

TGB	Het Groene Strand keurmerk
Green Beach	Een strand met het Groene Strand keurmerk
NLGO	Vereniging Natuur- en Landschapsbescherming Goeree-Overflakkee
TRA	Tijdelijk rustgebied
SRA	Zeehondenakkoord
SRF	Handelingskader Zeehondenopvang
SRC	Zeehondencentrum
MMRO	Reddingsorganisatie voor Zeezoogdieren
- EHBZ	Eerste Hulp bij Zeezoogdieren
- RTZ	ReddingsTeam Zeedieren
WAZ	Wetenschappelijke Adviescommissie Zeehondenopvang
Wnb	Wet Natuurbescherming
WD	Wet Dieren
HWC	Mens-dier conflict
HHC	Mens-mens conflict
CCT	Transformatie van Conflicten over Natuurbeheer
BOA	Buitengewoon Opsporingsambtenaar
CMS	Verdrag inzake de bescherming van trekkende wilde diersoorten
CWH	Verdrag inzake het behoud van wilde dieren en planten en hun natuurlijke leefmilieu in Europa
PD	Beleidsontwerp
RRP	Verantwoordelijkheden, rollen en samenwerkingsverbanden
SL	Sociale legitimiteit
- IL	Input legitimiteit
- OL	Output legitimiteit

1 Introduction

Sandy beaches on the Dutch shore are shared by multiple species, including seals and humans (Döring et al., 2021; Hörst, 2021). While seals use beaches for resting, moulting and pupping, humans mainly indulge in recreational activities such as swimming, sunbathing and walking (Harvey et al., 2022; Goossen et al., 2020). Studies on interactions between humans and all types of wildlife from all around the globe recognise this sharing of resources and landscapes as a major challenge in wildlife management (Frank & Anthony, 2021; König et al., 2020; Carter & Linnell, 2016). Leaving this challenge unaddressed typically results in a human-wildlife conflict. A human-wildlife conflict is a situation in which people's needs and actions negatively, positively, or neutrally influence wildlife or vice versa, or in which people's values about wildlife management strategies clash with each other (M. R Conover & D. O. Conover, 2022; Mekonen, 2020; Madden, 2004). Because thinking in terms of conflicts often imposes a division between landscapes for humans and wildlife – while human populations and tourism numbers are growing – managing their interactions becomes increasingly complex (De Jongh et al., 2021; Pimm, 2021; Peterson et al., 2010). König et al. (2020) found however that, in the last two decades, literature on human-wildlife interactions started to include references to coexistence. This new way of thinking focuses on co-presence rather than separation and is seen by scholars like M. R Conover and D. O. Conover (2022), Frank et al. (2019) and Carter and Linnell (2016) as key to effective wildlife management. Still, this way of wildlife management is complex when multiple stakeholders, roles, responsibilities, partnerships, values and policies are involved.

1.1 Problem Statement, Research Aim and Research Question

Seal populations in Dutch waters are faring well (Hoekstein et al., 2023; Brasseur, 2018). Therefore, the 2020 Seal Rehabilitation Agreement mandates letting stranded seals recover as much as possible on beaches on their own, preferably the ones where they are found. With beaches being one of the most loved tourist destinations and with growing tourism numbers (De Jongh et al., 2021; Dodds & Holmes, 2019), this new approach to seal rehabilitation implies encounters between seals and humans on beaches are bound to increase. Addressing these encounters calls for beach management strategies that centralise coexistence. Introduction of a beach eco-label is one such strategy (Botero, 2019; Honey, 2002). According to Boevers (2008), a beach eco-label is a certification scheme that conveys its criteria for beach management using a trademark and must have two dimensions: one focussing on people's values about beach management regarding the criteria of the eco-label (or the *human dimension*), and one focussing on ecological needs (for which the term *more-than-human dimension* is coined in this study). Boevers' theory implies that a beach eco-label that fails to account for both of these dimensions risks causing a human-wildlife conflict.

In response to the need to bring biodiversity back to beaches (Robbe et al., 2021; Schooler et al., 2019), The Green Beach eco-label was created in the Netherlands in 2021 (Het Groene Strand, 2021). According to the criteria of the label, beaches carrying it (hereafter called Green Beaches) show that they accommodate ecological needs and that agreements on their management and human use respect these needs. Currently, however, Green Beaches' criteria pay little attention to seals. When focusing on animals, they mainly mention birds.

Green Beaches' emphasis on biodiversity conservation suggests that they could also be fit for stranded seals. However, the current criteria concerning animal and human beach use focus

on separation rather than co-presence (Het Groene Strand, n.d.-a). Becoming suitable for seal rehabilitation calls for a shift to a beach management approach rooted in coexistence. Indeed, the strategies mentioned in the Seal Rehabilitation Agreement (introduced in Section 1.3) hinge upon offering seals room to recover on the beach where they have stranded while giving humans room to roam that beach *alongside* seals.

The 2018 report from the Scientific Advisory Committee on Seal Rehabilitation in the Netherlands (Wetenschappelijke Commissie Zeehondenopvang in Dutch and hereafter abbreviated to WAZ), on which the Seal Rehabilitation Agreement is based, particularly suggests using temporary resting areas to facilitate human-seal coexistence. However, the Seal Rehabilitation Agreement fails to mention such areas as a concept.

Moreover, in 2021 inefficiency in seal management manifested as a dispute settlement (Schouten, 2021). This settlement was reached to address differing values towards seal rehabilitation procedures. However, these differing values remained largely unspecified in the settlement notes. Conclusions drawn in the settlement notes suggest that these differing values, left unaccounted for in the Seal Rehabilitation Agreement, were also not reconciled in the settlement and therefore presumably remain unreconciled today.

The theory of Boevers (2008) and the approach to conflicts introduced at the beginning of this chapter imply that, in the context of human-seal interactions, the situation surrounding Green Beaches risks manifesting human-wildlife conflicts. Moreover, the coexistence terminology introduced at the beginning of this chapter (that Chapter 2 will explain in greater detail) indicates that leaving such potential conflicts unaddressed hinders the shift towards coexistence recommended by WAZ. Therefore, in light of the dispute settlement, it is desirable to ground the Seal Rehabilitation Agreement in a clearly formulated policy. Green Beaches provide an excellent place to do so as they are already focussed on ecological policy and are a prime location for human-seal interactions, meanwhile they omit any specific mention of seals in their criteria and in that sense therefore provide a blank slate for the purpose.

To resolve human-wildlife conflicts, scholars such as Zimmermann et al. (2020) and Madden and McQuinn (2014) encourage utilising the decision-making and partnership components of policies. Additionally, in order to shift to coexistence, various scholars, including Lute et al. (2020) and Carter and Linnell (2016), emphasise that the institutions managing these conflicts must be socially legitimate. However, explanations of the composition and structure of institutions often remain vague in coexistence studies concerning social legitimacy (M. R. Conover & D. O. Conover, 2022; Woolaston, 2022; Frank et al., 2019). This study consequently aims to understand how social legitimacy shapes the institutionalisation of human-wildlife coexistence by addressing the research question:

How do stakeholders' perceptions of the social legitimacy of seal rehabilitation inform the institutionalisation of Green Beaches?

Answers to the main question are sought through the following sub-questions:

1. What stakeholders pertain to seal rehabilitation on Green Beaches?
2. What roles and responsibilities pertain to seal rehabilitation on Green Beaches?
3. What partnerships pertain to seal rehabilitation on Green Beaches?
4. How do the stakeholders involved perceive the social legitimacy of decision-making processes for institutionalising policies for seal rehabilitation on Green Beaches?

To unravel the answers to these research questions, this report is structured as follows. First, the remainder of this chapter introduces the policies to be studied here as well as the case study. Chapter 2 provides the literature review and the conceptual model. Chapter 3 describes the methodologies used to collect and analyse data. Chapter 4 presents the results gained through these methodologies. Subsequently, Chapter 5 interprets the main results in light of the literature review. Lastly, Chapter 6 details the conclusions of this study and provides recommendations for future research.

1.2 The Green Beach

The Green Beach (TGB), also known as *Het Groene Strand* in Dutch, is a Dutch voluntary beach eco-label and project active since 2021 (Het Groene Strand, 2021). In that year, it was founded by LandschappenNL, IVN Natuureducatie, Stichting Duinbehoud, Stichting Anemoon and Vogelbescherming Nederland.

TGB's impetus and rationale arise from managing conflicts between the flora and fauna on sandy beaches in the Netherlands and humans visiting those beaches (Het Groene Strand, 2021; n.d.-a). The relationship between animals, plants and humans assumed herein is intrinsically connected to biodiversity conservation. Biodiversity conservation involves the worldwide trend of species decline (Evans, 2021; Pimm, 2021). While it is uncertain to what extent humans can reverse this trend, it has prompted discussions on how societies should approach relationships between humans and the planet's flora and fauna. TGB's approach and aim are to allow the conservation of all animals and plants living on Dutch sandy beaches to go hand in hand with human experiences of them (Het Groene Strand, 2021). The approach and aim are symbolised through pennants placed on site on Green Beaches, often alongside a flag (see [Figure 1](#)).



Figure 1. The Green Beach Pennant (top) and flag (bottom).
Photo: Het Groene Strand, n.d.-b.

As the flag in [Figure 1](#) illustrates, Green Beaches focus mainly on birds within its animal/more-than-human dimension. This study shifts the focus from birds and introduces seals as a new group of focal species.

1.3 The Seal Rehabilitation Agreement

The Seal Rehabilitation Agreement (SRA) is a written document, in effect since 2020, that seeks to establish uniform procedures for handling stranded live seals belonging to two species native to the Netherlands, namely harbour seals (*Phoca vitulina*) and grey seals (*Halichoerus grypus*). These two seal species are shown in the photo below and have many features that can be used to distinguish them from each other. For example, whereas a grey seal has a flat head and elongated snout, a harbour seal can be recognised by its round head and short snout (Das et al., 2023; Hall & Russell, 2018).



Figure 2. A resting grey seal (back) and harbour seal (front).
Photo: Ad 't Hart, 24 November 2022.

The SRA's rationale can be found in the 2018 report from WAZ. In their report, WAZ states that humans and stranded seals can share a beach provided human disturbance is minimised (Van der Zande et al., 2018). Table 1 below shows the strategies they recommend using for this goal.

Table 1. Strategies WAZ proposes for allowing seals and humans to share a beach

	Strategy	Situation	Source of inspiration
1	Informing and enforcing people	Generally ensuring people leave seals alone and call a Seal Rehabilitation Centre when in doubt whether seals (should) receive help	Lowry et al. (2011); Norris et al. (2011); Expert interviews; The status of Special Investigative Officer and wreck master
2	Creating temporary resting areas	When the beach is crowded with people	Norris et al. (2011)
3	Relocation to a (part of the) beach where it is quiet, and the seal can freely access the sea	When it is estimated cordoning off an area is not possible or going to end human disturbance; only for adult and weaned seals	Expert interviews

The SRA has given shape to WAZ's advice shape in the form of the following strategies:

- **Informing and enforcing** people to keep their distance from stranded seals in general
- **Creating a hotline** (specified as 144 in [Figure 3](#)) people can call to report stranded seals
- **Cordoning off an area** of a radius of at least 30, and preferably up to 50, metres around injured seals, suckling pups without a mother nearby, weaned seals and mildly ill seals when there are too many bystanders causing a disturbance
- **Relocating** the adult and weaned seals when cordoning off the beach is not feasible

1.4 Temporary Resting Areas for Seals

Zooming further in on WAZ's report, their advice about temporary resting areas (see [Table 1](#), p. 4) is interesting as it echoes the intentions of TGB and the SRA, namely, to contribute to biodiversity conservation and allow humans and seals to use a beach simultaneously.

Ultimately, the success of temporary resting areas (TRAs) in integrating the human and more-than-human dimensions of beach management hinges on the respect humans show for stranded seals' needs. Studies from Schneider et al. (2020) and Botero (2019) clarify that zoning measures that minimise recreation opportunities are likely to decrease such respect. Measures that require major behavioural changes from people, as is assumed to be the case for TRAs, may thus call for tools like signage, education, enforcement, and, in case many people cause a disturbance at the same time, a rope barrier (Allbrook & Quinn, 2020; Schneider et al., 2020; Isaacs, 2019).

Nevertheless, there remains uncertainty regarding the tools required to delineate TRAs. In particular, it is unclear if things like "enforcement", "using information boards" and "cordoning off an area" in the SRA (pp. 5, 8 and 9) together shape TRAs' meaning. After all, the SRA and WAZ's report both lack a definition of the term. TGB also does not provide much clarity as its criteria for birds do not give a clear definition of resting areas for any species.

Still, TRAs are not left completely undefined. WAZ's report namely mentions that seal guardians could create TRAs and, when granted the status of Special Investigating Officer (BOA), could even punish people who cause a disturbance. Seal guardians are also mentioned in the SRA as those tasked with cordoning off areas and placing information signs. Furthermore, the SRA proposes on-site signage (see [Figure 3](#)) and the strategies from Section 1.3 (p. 5) as tools to educate people about sharing the beach with seals and to involve them in seal rehabilitation. Lastly, in the case of Green Beaches, beach communities use oral storytelling and signage to convey information about beach ecosystem dynamics to raise awareness about conservation measures such as resting areas, which require behavioural changes and cooperation from human beach visitors (Het Groene Strand, n.d.-b).

The above facts imply that the SRA and TGB could potentially provide a context for making WAZ's reference to TRAs concretely applicable in the case of seals, namely seal guardians, beach communities, signage, education and the strategies from Section 1.3 (p. 5).



Figure 3. Sign and hotline as to the SRA. Photo: Ecomare et al., n.d.

1.5 Case Study: De Kwade Hoek

De Kwade Hoek Beach (hereafter called De Kwade Hoek) is a Green Beach stretching for about 5km along the northwest shore of the island Goeree-Overflakkee in South Holland. Moreover, it is among the ones that have received recognition as a Green Beach since 2021 (Schut et al., 2021; Het Groene Strand, 2023, 2022). In that year, Green Beach pennants were awarded for the first time. [Figure 4](#) shows a map of De Kwade Hoek.



Figure 4. Overview of De Kwade Hoek. The area on the right side of the row of wooden poles is closed off to the public during the bird nesting season (15 March to 15 August). Map: Anne-Joëlle Derksen, 22 December 2023.

De Kwade Hoek Beach became a Green Beach to improve its attractiveness for the flora and fauna living in the beach area as well as for human visitors to the area. Located near the tidal inlet of the Haringvliet River (see [Figure 4](#)) and downstream of sea currents, De Kwade Hoek is prone to accumulating thousands of kilos of riverine and marine litter per year (Strietman et al., 2023; Provincie Zuid Holland & Ministerie van Infrastructuur en Milieu, 2015). Research from Kaandorp et al. (2022) on nationwide washed-up marine litter between 2014 and 2019 even put De Kwade Hoek on the map as the largest litter hotspot in the southwest of the Netherlands. Not only does this litter harm beach-nesting birds due to entanglements and ingestions, but it also makes visiting the beach unattractive for beachgoers. Cleaning the beach mechanically is not an option, as it would also remove the seaweed and shells that provide food sources for birds and enrich beachgoers' experiences of plants and animals that live on the beach. However, these food sources and experiences can be maintained by cleaning the beach manually. The prospect of the changes that manual beach cleaning could bring about enticed Natuurmonumenten (the beach manager), volunteers of Natuur- en

Landschapsbescherming Goeree-Overflakkee (NLGO) (an organisation committed to the conservation of species and landscapes characteristic to the island of Goeree-Overflakkee), and the municipality of Goeree-Overflakkee (who used to clean De Kwade Hoek mechanically) into forming a partnership and turning De Kwade Hoek into a Green Beach. Today, the organisations continue to work together to protect the animals and plants living at De Kwade Hoek and offer beachgoers experiences with them. The organisations do this mainly by cleaning trash (5,000 kg per year on average), organising educational activities, designating fixed paths for motorised vehicles, monitoring species abundance and forms of disruption, placing information signs and creating resting areas for birds (Vroege Vogels, 2023; Het Groene Strand, n.d.-a, n.d.-b).

Even though little attention is paid to human and seal beach use at the moment, De Kwade Hoek seems suitable for achieving human-seal coexistence as well. De Kwade Hoek merits special attention since the wider Delta Region of which it is part (see [Figure 4](#), p. 6) is the most popular haul-out site among seals in the southwest of the Netherlands (Hoekstein et al., 2023; Brasseur et al., 2015).

In contrast to De Kwade Hoek and its name – meaning “the Evil Corner” in English, which is derived from the fact that ships used to get stuck on the sandbanks off its coast, especially during storms – the Hinderplaat sandbank (see [Figure 4](#)) off its coast provides a safe resting place for a couple of hundred grey seals and harbour seals each year (Hoekstein et al., 2023; Natura 2000, n.d.-a). De Kwade Hoek itself is frequented by these seals significantly less.

Additionally, of all Green Beaches, De Kwade Hoek is located closest to a Seal Rehabilitation Centre. [Figure 4](#) shows the centre nearest to De Kwade Hoek, which is called A Seal. The other centres are located mainly in the Wadden Sea area (another popular seal haul-out site in Dutch waters), none of whose beaches have yet been recognised as Green Beaches. The facts about the locations of centres, seal haul-out sites and Green Beaches, alongside (1) the SRA’s mandate to let stranded seals rest as much as possible on beaches, (2) WAZ’s advice to deploy TRAs to facilitate human-seal coexistence, and (3) Green Beaches’ dual focus on biodiversity conservation and human experiences of it, all together make the location of De Kwade Hoek in its capacity as a Green Beach for seal rehabilitation an excellent choice for this study.

At the time this study is being conducted, moreover, Natuurmonumenten and A Seal are in the exploratory phase of a beach management approach that hinges on human-seal coexistence (Natuurmonumenten, personal communication, 24 September 2022). This study may serve to offer them further insights into the implications of their approach. In addition, this study could be considered as valuable input for the framework for beach use that the 2023 Strandnota Goeree-Overflakkee requests, as well as for the 2024 interim evaluation of the SRA and the further resolution of the 2021 dispute settlement.

Finally, this study is written with the thought in mind that the findings could be applied to other (potential) Green Beaches in the Netherlands. Or, outside the Netherlands, the findings could apply to places with similar dynamics between humans and seals as assumed in this study. Examples of such places include the Vatnsnes Peninsula in Iceland, the Kaikoura Peninsula in New Zealand and the Jersey Shore in the United States of America, to name a few.

2 Literature Review

This section's purpose is to develop an understanding of the concepts used to find an answer to the main research question. First, Section 2.1 provides a brief definition of coexistence, which constitutes the intended state for managing human-seal encounters on Green Beaches. Afterwards, in Section 2.2, a literature review is conducted to conceptualise the dimensions associated with coexistence and selected in this study. A conceptual model illustrating these dimensions and their relations will also be provided. This model can be found in Section 2.3.

2.1 Coexistence

Starting with the definition of coexistence, the present study will give attention to Carter and Linnell's (2016) widely adopted conceptualisation of it in social-scientific literature. They describe coexistence as a "dynamic but sustainable state in which humans and large carnivores co-adapt to living in shared landscapes where human interactions with carnivores are governed by effective institutions that ensure long-term carnivore population persistence, social legitimacy, and tolerable levels of risk" (Carter & Linnell, 2016, p. 575).

Based on Carter and Linnell's (2016) definition, the institutionalisation of coexistence centres around five dimensions: risk, tolerance, social legitimacy, institutions and governance. At its core, in other words, coexistence relates long-term wildlife populations' viability in shared landscapes to the management of occurring human-wildlife conflicts within socially accepted boundaries. Practical solutions alone are considered to be insufficient: barriers, for instance, are only effective if humans are willing to respect them, and population persistence efforts can be thwarted by the intentional killing of wildlife by third parties. This is where the institutional dimension of coexistence comes in. Institutions create socially accepted boundaries for human-wildlife conflicts and the resolutions of such conflicts. Moreover, the governance dimension of coexistence suggests that institutions are built around partnerships.

Coexistence is defined differently when studied from a natural-scientific perspective. Natural science emphasises gaining insights into wildlife ecology and behaviour to better manage human-wildlife interactions, often translating into the need to give wildlife more room in the landscapes they share with humans (Othman et al., 2019; Chapron & López-Bao, 2016). Green Beaches and De Kwade Hoek in particular are seen as the embodiment of this perspective and translation into the context of this study. However, in light of the 2021 dispute settlement, it would also be useful to consider people's values regarding the management of human-wildlife interactions. Therefore, this study views coexistence from a social-scientific perspective. Specifically, concerning the dimensions of coexistence that Carter and Linnell (2016) mention, attention is given to three of them: institutions, social legitimacy and partnerships. The next sections will delve deeper into these dimensions and the concepts they closely relate to.

2.2 The Dimensions of Coexistence

2.2.1 The Institutional Dimension

Given that the definition of institutions and their implementation often remains vague in coexistence studies, including that of Carter and Linnell (2016), this section aims to fill the gap through insights from other studies in social science. Carter and Linnell (2016, p. 575) characterise the term institution in their article as "rules that govern human behaviour". However, akin to references in for example Hodgson (2006) to rules structuring social

interaction, in Ostrom (1992) to rules used to organise recurring activities, and in North (1990, 3) to “rules of the game in society”, Carter and Linnell’s (2016) definition misses a link with values – the glue between the institutional and social legitimacy dimensions of coexistence.

Carter and Linnell’s (2016) definition of institutions also lacks a link to organisations, a key concept within the partnership dimension of coexistence. This study consequently takes up Greif’s (2006) interpretation of an institution. According to Greif, an institution comprises four components: rules, beliefs, norms, and organisations. Rules, such as policies and laws, are instructions that help people understand what behaviour is expected of them in a particular situation and are constituted and disseminated by organisations. However, rules by themselves do not motivate people to follow them. Therefore, for people to follow the rules, motivation is needed. This motivation stems from beliefs and norms.

Beliefs are cognitive models that explain the causal relationship between actions and the consequences of these actions to people and require the police and court to be possible. For example, if people *believe* they will be fined if they break a rule, Greif (2006) infers that they are *motivated* to decide if it is worthwhile to follow the rule.

Norms, on the other hand, are socially constructed standards for behaviour. This means people are motivated to take an action if it is accepted and followed by people around them. Complementing this insight from Greif (2006), Maltseva (2018) and Hansson (2002) argue that norms are legitimised by values, which are (mostly intangible) things people consider important to them and that they acquired through experiences with the world around them since childhood. Hence, values are resistant to change and help people shape their goals. Values also shape standards against which behaviours are deemed good or bad.

The difference between norms and values is that a norm describes how a behaviour should be whereas a value is a criterion by which a behaviour is considered good or bad (Maltseva, 2018; Hansson, 2002). For example, two people might follow the norm to ‘respect seals’ but have different values about how humans should treat seals. One person might consider killing seals good if it ends their suffering. Yet the other person might consider killing seals unacceptable under any circumstances.

Nevertheless, critics find Greif’s (2006) definition of an institution to be too loose for two reasons. First, they argue that the definition is so general that nearly any behaviour can fit the definition (Gräbner & Ghorbani, 2019; Clark, 2007). Second, they point out that the definition is limited to institutions that prescribe behaviours and ignore the possibility that “do what you want” (Clark, 2007, p. 736) could also be part of an institution. The first criticism poses no problems for the present study since the definition of institution is used here in a manner that is specific to the extent that it is unlikely to apply to arbitrary behaviours. The second criticism is acknowledged here and corrected for by expanding Greif’s (2006) definition to include institutions that strive to connect different things that different individuals may want. Moreover, Greif intentionally defines an institution loosely since his four components, although distinct, are interrelated and can change over time. Therefore, the dynamic nature of states of coexistence, as emphasised by Carter and Linnell (2016), makes Greif’s (2006) conceptualisation suitable for this study.

Regarding the components of an institution under consideration, this study mainly centres on values, policies (i.e. rules) and organisations. The next section will elaborate on values and their relation to social legitimacy.

2.2.2 The Dimension of Social Legitimacy

In the literature on institutions, various scholars such as Haack et al. (2020), Lute et al. (2020), Buchanan (2018), Bodansky (1999) and Suchman (1995) discuss the concept of legitimacy as an indication of the appropriateness of an institution for the social context in which it is applied. In other words, the legitimacy of an institution is acceptability in the eyes of people and their estimate of its worthiness of being followed. Drawing on this conceptualisation, Lute et al. (2020) found that determining the legitimacy of an institution for coexistence necessitates a profound understanding of the involved stakeholders' roles and their values regarding decisions encoded in wildlife management policies. The findings of Lute et al. (2020) are applied in this study since they build on the work of Carter and Linnell (2016), in which legitimacy is left undefined.

In creating institutions for coexistence, therefore, one of the main challenges is often the integration of divergent values. Drawing from works of scholars such as Matulis and Moyer (2017), Von Essen and Hansen (2015), Berlin (2013) and Mansbridge (1999), Lute et al. (2020) introduce the concept of value pluralism. The authors explain that value pluralism or the embracing of diverse viewpoints can be included in institutions for coexistence by explicitly acknowledging that stakeholders "have fundamental value-based incompatibilities but that all are legitimate, [and] by creating space for dissent in the decision sphere (even when that dissent does not agree with technocratic perspectives)" (Lute et al., 2020, p. 7). This study goes one step further and links the authors' reference to dissent with human-wildlife conflicts. The following section delves deeper into the nature and definition of human-wildlife conflicts.

Social Legitimacy in Relation to Human-Wildlife Conflicts

The concept of human-wildlife conflict refers to a situation where humans' needs and actions influence free-roaming animals (i.e. wildlife) or vice versa (Fine et al., 2023; Mekonen, 2020). Free-roaming animals are used in this definition due to the emphasis on displays of natural behaviour, which is the fundamental motivation for introducing grey and harbour seals as new species for Green Beach management (more on this follows in Section 4.2.1, p. 34).

Additionally, the word "conflict" in the concept's name tells impacts on and of wildlife are traditionally viewed as negative (Woolaston, 2022; Hodgson et al., 2020). Think of bears and wolves in Europe killing livestock; elephants and tigers in India losing their habitats due to deforestation; and changes in blue whales' migration routes due to climate change, increasing crashes into vessels (Abrahams et al., 2023; Gervasi et al., 2021; Sharma et al., 2020).

In the last two decades, however, there has been criticism regarding the focus on negative influences. Scholars such as Bhatia et al. (2020), Frank (2016) and Redpath et al. (2015) argue that the influences in question in a human-wildlife conflict can also be neutral or positive. They propose seeing influences as neutral when they do not change people's attitudes toward wildlife and as positive when people start taking action to protect wildlife.

Most conservation actions that acknowledge that encounters between humans and wildlife can have negative, neutral or positive outcomes focus on ecological aspects (Fletcher & Toncheva, 2021; König et al., 2020; Kittinger et al., 2012). This means attention is given to the needs of wildlife and their habitats – not humans.

Literature on solutions for meeting wildlife and their habitats' needs mainly covers monetary fixes, legal actions, technical solutions and spatial actions (Langbauer et al., 2022; Margulies & Karanth, 2018; Kittinger et al., 2012; Woodroffe et al., 2005). As the analysis of

coexistence's definition from a natural-scientific angle in Section 2.1 (p. 8) hints, solutions like these often overlook conflicts between people (i.e. human-human conflicts) over wildlife (M. R Conover & D. O. Conover, 2022; Woolaston, 2022; Hodgson et al., 2021). This is problematic because when such a conflict remains unaddressed, the animal in question becomes a symbolic manifestation of that conflict and an obstacle to long-term conservation progress.

Take for instance human-wolf conflicts in various parts of Europe. In France and Norway, farmers' perceptions of wolves were so negative that they suspected the government reintroduced the animals in secret into their region (Skogen et al., 2019). Or, in Slovakia, the loathing of wolves persists despite sheep predation being negligible (Hovardas, 2018). Closer to home, in the Netherlands, a fear of wolves undermines public acceptance of their resurgence even though attacks on humans are rare compared to other risks (Kuijper, 2019). These conflicts are driven by broader issues concerning social change, in which the relationships between the stakeholders involved are deteriorating and there are deeply held differences in the symbolic wildlife values (Zimmerman et al., 2020; Frank et al., 2019).

The examples about wolves show that understanding human-wildlife conflict (HWC) may require considering more than just the negative, neutral or positive impacts of wildlife on humans' needs and actions and vice versa. Specifically, these examples highlight that understanding an HWC could also require recognising situations in which there is a clash in people's values regarding wildlife management strategies.

Furthermore, adding to the insight about values and drawing links with institutions' rule component, scholars like Woolaston (2022), Cretois et al. (2019), and Frank et al. (2019) emphasise the importance of recognising that conflicts over values around how humans should treat wildlife can also arise due to clashing mandates of rules. For example, in institutions consisting of multiple rules, some rules – and thus people – might prioritise wildlife and their habitats, whereas others might prioritise a scenario where humans are also included.

This study consequently defines HWCs as situations where humans' needs and actions negatively, neutrally or positively impact wildlife or vice versa; or where humans' values over wildlife management strategies clash; or a combination of both. It also views clashing values as what Lute et al. (2020) call dissent and recognises that this dissent can be rule-induced.

As per the Conservation Conflict Transformation (CCT) framework of Zimmerman et al. (2020) and Madden and McQuinn (2014), an HWC as defined in this study can occur and be addressed at three levels. The division into the three levels is grounded in peacebuilding principles and processes of the Canadian Institute for Conflict Resolution (2000) and the recognition that long-term wildlife conservation is most successful when it acknowledges HWCs' natural ebb and flow. [Figure 5](#) (p. 12) depicts these levels, which this study sees as key to differentiating conflicts related to needs and actions from those related to values.

Level 1 Conflicts: Disputes and Settlements

A level 1 (L1) conflict or dispute involves both wildlife directly and human-human conflicts over wildlife (Zimmermann et al., 2020; Madden & McQuinn, 2014). Starting with the wildlife directly involved, this means that the HWC arises when wildlife's needs and actions have negative, neutral or positive impacts on people or vice versa. These impacts lead people to have disputes (human-human conflicts) over negotiable interests such as resources and safety, making it an HWC's most tangible and easy-to-identify manifestation. The tangibility and the

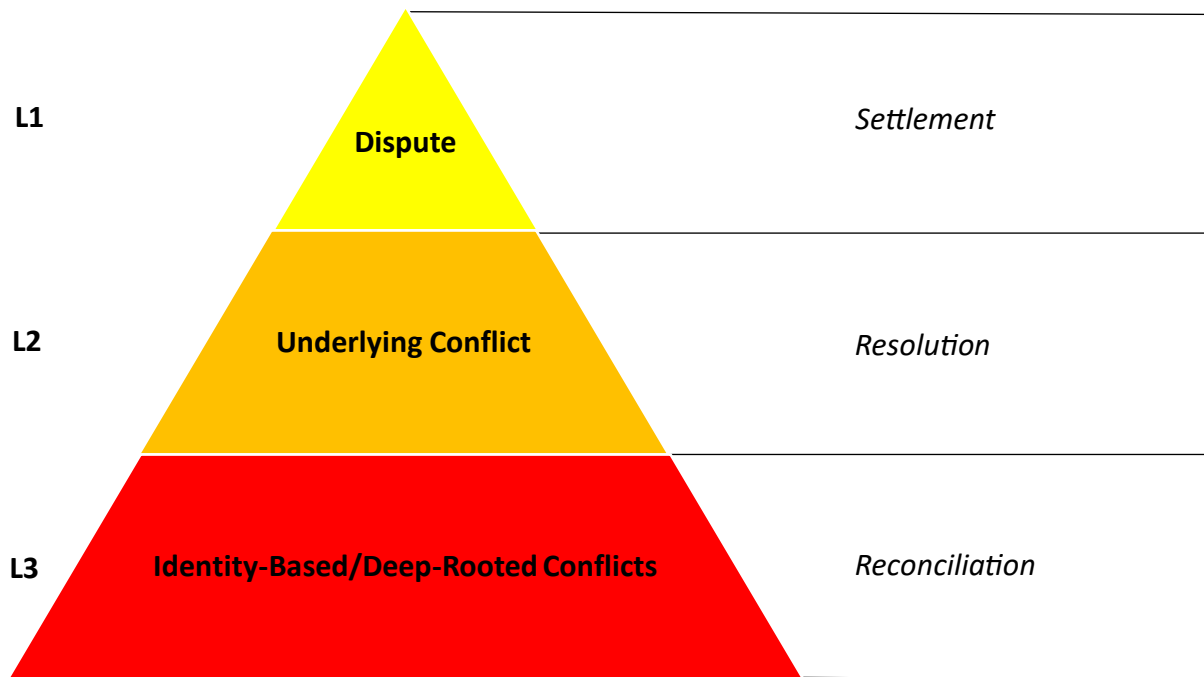


Figure 5. The levels at which an HWC may occur and corresponding ways to address them (adapted from Madden & McQuinn, 2014, p. 100 and Zimmermann et al., 2020, p. 2)

identifiability of disputes clarify why level 1 conflicts can be settled through practical solutions that consider the needs of wildlife and their habitats while also seeking “to restore safety, or protect from, compensate or recover and prevent damage and economic losses” (Zimmermann et al., 2020, p. 5). Examples of practical solutions include barriers and lethal control.

Level 2 Conflicts: Underlying Conflicts and Resolutions

Although some HWCs solely occur at level 1, most HWCs result from an underlying or level 2 conflict (Zimmermann et al., 2020; Madden & McQuinn, 2014). A level 2 (L2) conflict involves a history of failed attempts to resolve a dispute. These failed attempts commonly lead to an accumulation of frustrations about the situation among one or more of the parties involved. Over time, these built-up frustrations spark an “us” versus “them” mentality, obstructing the creation of a space for the more inclusive “we” that CCT aspires to facilitate and which is often already present in conflicts that remain at level 1.

Turning an “us” versus “them” into a “we” mentality requires addressing the history of disputes and finding common ground (Zimmermann et al., 2020; Madden & McQuinn, 2014). Practical solutions remain crucial but will only resolve the HWC effectively when combined with approaches that address underlying interests. This implies that emphasis must be put on relationship building, which often involves the assistance of a mediator in discussing the history of disputes and reframing the issues raised from destructive to constructive outcomes.

Level 3 Conflicts: Deep-Rooted Conflicts and Reconciliation

A level 2 conflict can also be a level 3 (L3) or deep-rooted conflict when at least one of the parties perceives it as a threat to their identity or way of life (Zimmermann et al., 2020; Madden & McQuinn, 2014). For example, a conservation organisation’s focus on wildlife needs might be seen as disregarding a local community, turning the conflict into one about intangible

issues like freedom and respect. Madden and McQuinn (2014) refer to Burton (1984) to explain that when people's non-material needs are threatened, they often engage in self-destructive behaviours to prevent their opponents from winning.

As with level 2 conflicts, resolving level 3 conflicts requires practical solutions and a mediator (Madden & McQuinn, 2014; Zimmermann et al., 2020). However, the mediator now facilitates a dialogue on decision-making processes and responsibilities rather than the disputes' history. The upcoming section details the interpretations of practical solutions and decision-making processes used in this study and their relation to social legitimacy. Responsibilities are seen as separate from social legitimacy and consequently follow later in Section 2.2.5.

The Lenses of Social Legitimacy

Zimmermann et al. (2020) and Madden and McQuinn (2014) advocate integrating their proposed levels for addressing HWCs into institutions. While they do not explicitly offer guidance on this implementation, they emphasise human-wildlife interactions as a dynamic state, aligning with this study's definition of coexistence. Attempting to fill this knowledge gap, several parallels (that follow later in this section) are drawn between CCT and social legitimacy.

There are three forms of social legitimacy that link with creating a healthy space for dissenting values in institutions for coexistence that not only Lute et al. (2020) but also Serenari and Taub (2019) recommend enhancing. The first form is input legitimacy and involves addressing the preferences of government and non-government stakeholders, including local communities, concerning decisions encoded in policies on how humans should manage wildlife. Output legitimacy is the second form and centres around ideal goals in terms of managing human-wildlife interaction and wildlife conservation and the most efficient strategies to achieve them. The third form, throughput legitimacy, regards a decision-making process' quality and grasps transparency, reliability, accountability, deliberation and responsiveness.

This study sees the three forms of social legitimacy as synonymous with values, and the concept of social legitimacy as a tool or pathway to understanding and integrating dissenting values within institutions for coexistence. Furthermore, this study will focus on two of the three forms: input and output legitimacy. With respect to input legitimacy, the corresponding values will be understood as preferences or things people consider important to them, which in the context of wildlife management form the initial motivation for the policies that ultimately encode – often imperfectly – the decision-making processes for how humans should manage wildlife. These encoded decision-making processes reflect the core themes which were the original context in which people's values arose, yet the resulting rules encoding them may conflict with the original values when put into practice and give rise to level 3 conflicts.

With reference to this study's working definition of HWCs, since the core themes (that the Results Chapter will outline later) also comprise needs, the part about needs is seen as something that should be studied from both natural-scientific and social-scientific perspectives. Put differently, the core themes specify that, regarding level 1 conflicts, the direct impacts on and of the needs of wildlife can also lead people to have disputes over the needs of humans and wildlife. Naturally, this study gives attention to these needs from a social-scientific perspective. Specifically, it explores them following the pathway of input legitimacy.

Through the lens of output legitimacy, this study aligns values with ideal goals for managing human-seal interactions, beach management, seal conservation and rehabilitation, and the most efficient strategies to achieve them. While interpretations relating to the SRA and Green Beach policy are mainly left open to the involved parties, those regarding TRAs will be primarily predefined and include coexistence (goal) and TRAs (strategy/practical solution for managing occurring level 1 conflicts). However, the exact details of what TRAs entail will remain up to the parties' insights.

2.2.3 The Dimension of Partnerships

The institutions described in Section 2.2.1 (p. 8) result from a complex interplay between organisations. In contemporary institutions, these organisations encompass a mixture of state and non-state ones (Ansell & Torfing, 2022; Partelow et al., 2020; Alexander, 2019). Since state organisations play a facilitating rather than steering role, the *mechanism* by which they and non-state ones constitute and enforce institutions' rules can be described as governance.

In governance literature, the interactions between organisations are frequently referred to as partnerships. As these partnerships bring together state and non-state organisations, their *type* is also known as public-private partnerships or cross-sector collaborations.

According to Bryson et al. (2006), cross-sector collaborations are arranged collaborations and refer to "the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately" (p. 44). The reason why scholars favour this formulation traces back to the 2002 "partnership summit" in Johannesburg. This is the nickname of the 2002 World Summit on Sustainable Development. As the nickname implies, governments could not reconcile their approaches to global biodiversity conservation management, among other things (Florini & Pauli, 2018; Visseren-Hamakers et al., 2012; United Nations, 2002). The summit consequently relied on partnerships instead of intergovernmental agreements.

However, the employment of partnerships raised the question of to what extent the delivery of public goods and the attending to societal interests are the responsibility of non-state organisations (Florini & Pauli, 2018; Glasbergen et al., 2007). This question had already been discussed at earlier summits, including the 1992 Earth Summit in Rio de Janeiro. Borrowing from this and other summits' discussions, the conclusion was that it is the joint responsibility of state and non-state organisations to manage the interests of wildlife (a public good) and humans (or societal interests) in a landscape (another public good) they share.

To emphasise the role partnerships can play in conflict reconciliation, this study adopts a slightly adjusted version of the definition quoted above by Bryson et al. (2006, p. 44), namely: ". . . organisations in two or more sectors [who engage in dialogue with each other to] . . .".

Furthermore, partnerships built on this study's conceptualisation are often based on whether they are formal (i.e. written agreements) or informal (i.e. non-written agreements) (Vazquez-Brust et al., 2020; Bryson et al., 2020). This study takes up partnerships that emerge in the SRA, WAZ's report and Green Beach policy.

The last key aspect of partnerships that follow this study's definition concerns their capacity to be established across different levels, varying from local to international. This study is mainly carried out in a regional context and thus focuses on a regional level. HWC collaborations, a

sub-form of public-private partnerships popular in studies on human-wildlife interactions, are left out of scope since they apply to a global context (Madden, 2004; Draheim et al., 2015).

2.2.4 The Binding Factor of the Dimensions of Coexistence: Policy Designs

One of the vital roles that public-private partnerships play within institutions for coexistence and addressing HWCs is in policy formulation (Fiasco & Massarella, 2022; König et al., 2020; Frank et al., 2019). Policy formulation is the stage after agenda-setting¹ in a policy process² (Weible, 2023; Hill & Varone, 2021). In public policy literature, policy formulation is used reciprocally with policy design (PD) and understood as the translation of identified issues into coherent programmes. Unlike closely related concepts such as policy layering and policy reform, PD does not consider institutional change but looks at how a policy is constructed and the implications of these constructions (Hill & Varone, 2021; Daugbjerg & Feindt, 2019).

PDs are driven not only by objective knowledge but also by values (Hill & Varone, 2021; Knill & Tosun, 2020). Therefore, to truly grasp the institutionalisation of coexistence, it is essential to move beyond factual insights towards an understanding of stakeholders' perceptions of their responsibilities, roles and partnerships and the social legitimacy of PDs for wildlife management. After all, stakeholders' perceptions drive the underlying construction of HWCs and institutions' rule component (Zimmermann et al., 2021; Greif, 2006). But what is a PD?

From Junginger (2013, p. 4), "a policy in design terms is a guideline or framework that delineates the kinds of services and products, the relationships and the manner of the interactions that are possible, encouraged or discouraged within and by a particular [institution]". Expressed through the institutional, social legitimacy and partnership dimensions of coexistence, a PD is thus seen in this study as a guideline delineating the responsibilities, roles and partnerships encouraged by an institution. In addition to a PD, this institution is further considered to comprise social legitimacy and organisations. It is also acknowledged that an institution can comprise multiple PDs. Collectively, these elements – PD(s), institution, social legitimacy and organisations – determine the acceptance of coexistence. In this study, this interpretation of PDs will be applied to Green Beaches, the SRA and TRAs.

2.2.5 Further Defining Organisations, Stakeholders, Responsibilities and Roles

Having discussed the key dimensions of coexistence, the closely related concepts of stakeholders, organisations, roles and responsibilities require further definition. These definitions will partly be given using the earlier reviewed literature on the dimensions of coexistence reviewed earlier. Moreover, since none of this literature defines stakeholders, this concept will also be defined using social-scientific literature in general.

Starting with stakeholders, Nguyen Long et al. (2019) and Harrison et al. (2019) define them as a group or individual who determines or is affected by a PD, or both. It is assumed here that different stakeholders can work for the same organisation. In such cases, this study considers them as part of the same foundation, business, government agency et cetera.

¹ Agenda-setting refers to the process of analysing a problem and putting the identified issues on the policy agenda (Weible & Sabatier, 2018)

² The stages of a policy process typically include problem emergence, agenda-setting, policy formulation, policy implementation and evaluation (Weible, 2023)

Nevertheless, organisations should not be confused with institutions. To repeat Greif's (2006) view on the relationship between them: organisations govern institutions. This implies that institutions cannot exist without organisations, whereas organisations may exist without institutions.

In considering stakeholder involvement, it is also essential to comprehend roles and responsibilities. Regarding roles, this study takes up the definition of Lute et al. (2019). As such, roles describe what a stakeholder does within an organisation or what an organisation does within a partnership, like a veterinarian, conservationist or mediator.

Responsibilities, however, are left undefined in the work of Zimmermann et al. (2020) as well as Madden and McQuinn (2014) on CCT. To ensure alignment with the key concepts earlier defined, this study employs Greif's (2006) understanding of institutions to define responsibilities as actions and situations that stakeholders must deal with. Examples of responsibilities following this definition include providing medical treatment to sick animals, releasing recovered animals back onto beaches and the settlement of dispute.

2.3 Conceptual Model

To sum up, the key takeaway from this chapter is that responsibilities, roles, partnerships and social legitimacy play a central role in understanding the institutionalisation of coexistence. Figure 6 shows the connections between these and closely related concepts.

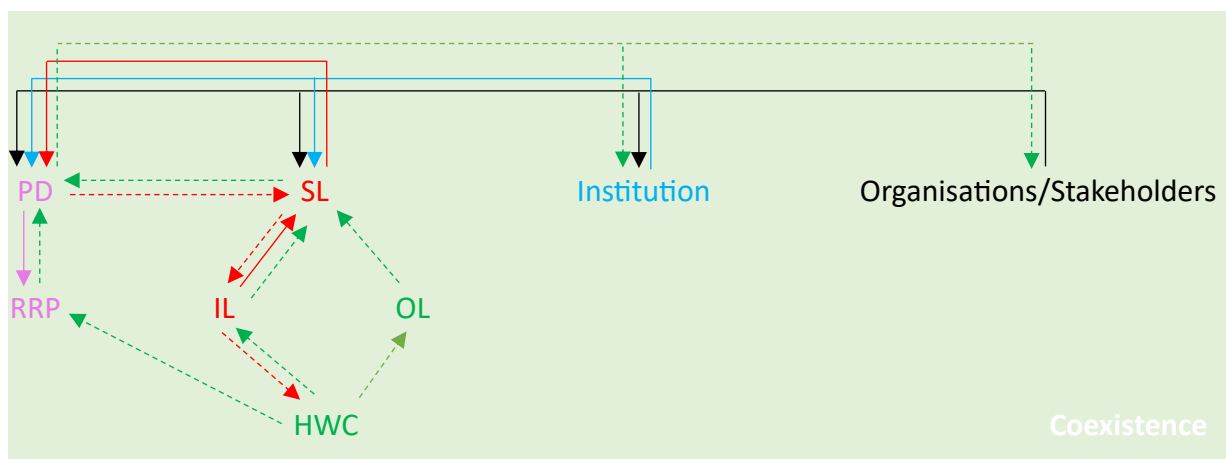


Figure 6. Conceptual model

As Figure 6 illustrates, responsibilities, roles and partnerships (RRP) are shaped by PDs, which in turn are formed by social legitimacy (SL), an institution and organisations/stakeholders. Since coexistence constitutes the overarching theme of these and other elements and their connections, it provides the backdrop against which they exist.

Shifting focus from PDs to SL, Figure 6 also shows that SL is shaped by input legitimacy (IL) and output legitimacy (OL) as well as an institution and organisations/stakeholders. Of the two kinds of SL, moreover, the red solid line arrows in Figure 6 indicate that IL should always inform PDs. Emphasis is put on *should* since the studied PDs currently lack them.

In situations where the (missing) IL of one or multiple PDs within an institution comprise or give rise to dissenting voices, the red dotted line arrows in Figure 6 tell that they manifest as an HWC. To effectively manage this HWC, the green dotted line arrows illustrate that the RRP

of the PD(s) and the IL in question need to be addressed. Furthermore, the green dotted line arrows highlight the importance of addressing OL, the counterpart of IL. While being addressed, lastly, the dotted line arrows also show that the PD(s), SL, institution and organisations/stakeholders in which the RRP, IL and OL are ingrained will organically be adjusted. This is due to the dynamic nature of coexistence. Should similar dissenting voices occur in the future, this means that coexistence now comprises the right organisations/stakeholders, institution, SL and PD to effectively address them. However, if new voices of dissent arise, the red dotted line arrows indicate that a new HWC will manifest. As a result, in such a case, the entire process described in this paragraph repeats itself.

A summary of the key terms and their meanings, the theory and aim shown in [Figure 6](#) (p. 16):

- **Coexistence:** a dynamic state in which wildlife (i.e. free-roaming animals) and humans co-adapt to being present in a shared landscape (Green Beaches in this study's case) and where the interactions of these humans and wildlife are managed by institutions that look after long-term wildlife population viability, social legitimacy and HWCs
- **Institution:** PD(s), SL, organisations and stakeholders collectively
- **Social legitimacy (SL):** input and output legitimacy collectively
- **Input legitimacy (IL):** preference/perceived importance concerning a PD's core themes
- **Output legitimacy (OL):** ideal goals for managing human-wildlife interactions, beach management, seal conservation and rehabilitation, and the most efficient strategies/practical solutions for achieving them. While OL recognises that PDs are shaped by goals and strategies/solutions, as opposed to IL, it highlights the need to first explore stakeholders' ideal goals in terms of wildlife/beach management and seal rehabilitation and conservation in general. Afterwards, like IL, OL says that stakeholders' perceptions can be compared with those included in PDs
- **Responsibilities (R):** actions and situations dealt with
- **Roles (R):** general positions in/of an organisation
- **Partnerships (P):** collaborations between two or more stakeholders/organisations
- **Stakeholder:** a group or individual who affects and/or is affected by a policy design
- **Organisation:** a group of stakeholders who work for the same foundation, agency etc.
- **Policy design (PD):** a guideline that defines the responsibilities, roles and partnerships an institution encourages
- **Human-wildlife conflict (HWC):** a situation where the (missing) IL of one or multiple PDs within an institution comprise or give rise to dissenting voices
- **Theory and aim:** HWCs often arise when stakeholders' values over wildlife clash. Resolving such conflicts requires practical solutions (e.g. TRAs) and a dialogue on decision-making processes and responsibilities encoded in PDs on wildlife management. However, to achieve long-term wildlife population viability in shared landscapes, it is also crucial that the discussed decision-making processes and responsibilities and the established solutions are socially accepted and followed. The building blocks of this acceptance are PDs and the input and output legitimacy, partnerships, responsibilities and roles of stakeholders/organisations underlying its design; the mechanism by which these building blocks are established and maintained is called an institution. This study uncovers how the building blocks shape the institutionalisation of Green Beaches as a meeting place for humans and seals

3 Methodology

This chapter delineates the methodology employed for conducting this research. The methodology is carefully chosen on the basis of the previously presented literature review and will be outlined as follows. First, Section 3.1 introduces the philosophical perspective taken. Following that, Section 3.2 describes the overall methodological design. Section 3.3 then details the respondents and sampling procedure. Additionally, Sections 3.4 and 3.5 explain the data collection and analysis procedures. Lastly, Section 3.6 discusses ethical considerations that guide the design of this study.

3.1 Philosophical Perspective

This study took an interpretivist philosophical perspective. Interpretivism posits that reality is socially-materially constructed and experienced subjectively (Gorton, 2010). Put differently, it emphasises that reality is shaped both by observable phenomena and by how people think about, see and feel their surroundings. To underscore this emphasis, this study acknowledges all observable phenomena and social constructions related to De Kwade Hoek by collectively presenting them under the name “De Kwade Hoek” as co-authors of this study.

Using an interpretivist perspective was beneficial for three reasons (Rosenthal, 2018; Yazid, 2015; Levers, 2013). To start, it allowed for understanding Green Beaches' institutionalisation from the respondents' viewpoints, which was the main goal of this study. Secondly, it offered opportunities to move beyond “universal truths” and give context-specific explanations. Finally, it was anticipated that an interpretivist approach would help overcome the “outsiderness” of the researcher, further improving this study's success.

3.2 Overall Methodological Design

According to Mogomotsi et al. (2020), Thondhlana et al. (2020) and Veríssimo et al. (2019), qualitative research methods prove valuable in uncovering a person's perspective on institutions for human-seal coexistence. This is due to its exploratory nature and aligns with the main research question concerning how stakeholders' perceptions of social legitimacy inform the institutionalisation of seal rehabilitation on Green Beaches.

Had the perceptions been known and had the objective been to test which perceptions are closest to and farthest from each other, a quantitative method might have been better. This method would also have been more fitting if emphasis was put on one reality – rather than multiple, as in this study. The design of this study was thus built on qualitative methods, which Section 3.4 will stipulate. But first, the population, respondents, sample and sampling procedure will be discussed in more detail.

3.3 Respondents

Since the primary goal of this study was to understand how social legitimacy informs the institutionalisation of seal rehabilitation on Green Beaches, the population of interest comprised stakeholders encoded in the studied PDs and whose work mainly takes place on the beach. The sample or respondents were those who work at De Kwade Hoek, namely: volunteers from NLGO, individuals who work for Natuurmonumenten and the municipality of Goeree-Overflakkee, TGB's project manager, veterinarians or professional animal keepers of

the three operational Seal Rehabilitation Centres, seal guardians of ReddingsTeam Zeedieren and Eerste Hulp bij Zeezoogdieren, and the mediator who led the 2021 dispute settlement. A full overview of the respondents interviewed can be found in [Appendix A](#) (p. 92).

The respondents were accessed via snowball sampling, a widely used non-probability sampling technique (Berndt, 2020; Parker et al., 2019). This technique allowed the researcher to connect with respondents through the information available in the PDs and their existing professional networks. Specifically, Geert Faasse was consulted because he was part of the researcher's network and engaged with almost all respondents in his daily activities as coordinator of NGLO's Beach and Sea Group. This made him the perfect person to ensure access to appropriate representatives among the identified stakeholders while efficiently using the time that was available for this study (more on Geert's position in this study follows in Section 6.4.4).

Snowball sampling, however, also has its downsides. Primarily, these are sampling bias and a lack of or overly strong interest in cooperation (Berndt, 2020; Bhardwaj, 2019; Parker et al., 2019). Sampling bias could occur if Geert proposed respondents who closely align with his values. To counter this, careful consideration was given to respondents who could offer the most diverse perspectives. Section 6.4.4 will describe how the shortcoming regarding cooperation was addressed while collecting data.

3.4 Data Collection

Data collection took place in two phases. The first phase was the familiarisation phase and occurred online, via phone call and on location at De Kwade Hoek. Interviews were conducted with stakeholders in the second phase or fieldwork phase.

3.4.1 Familiarisation Phase and Literature Study

The familiarisation phase aimed to thoroughly grasp the rationales behind Green Beach policy, the SRA and TRAs. This understanding was gained through a (grey) literature review. Initially, each PD was searched using its title on Google. Once found, a closer look was taken at the reasons given for its formulation. In addition, cited sources were searched on Google to verify and cross-reference the insights found.

Besides the cited sources, a separate scientific literature review was conducted to validate the data from the PDs. This was done by entering a key term that had surfaced in the PD review, for example, biodiversity conservation or grey seal, into Google Scholar. At least one and preferably two of the sources appearing were then searched for information either confirming or refuting the PD review's findings, although in no case was refuting information found. In addition, to ensure the reliability of the literature sourced, priority was given to peer-reviewed articles that had the most citations and were published within the last five years.

Simultaneous with the PD and validation study, the rationale for De Kwade Hoek's designation as Green Beach was explored. This was important due to De Kwade Hoek being the case study.

The insights into De Kwade Hoek's rationale were obtained through a phone call and visit to De Kwade Hoek with Geert Faasse. After these interactions, summaries were written and shared with Geert for feedback. These refined summaries were used to further substantiate the validity of the reviewed PDs and literature.

In instances where new rationales and PDs emerged, procedures similar to the initial PD review were followed. This mainly meant the scope of the search expanded to cover the 2023 Strandnota Goeree-Overflakkee.

Following the review and validation of the PDs and the interactions with Geert, a theoretical understanding of coexistence and its key dimensions was acquired. This insight was searched since it provided the backdrop for studying seal rehabilitation on Green Beaches. The theoretical understanding of the backdrop was developed using Google Scholar as a search engine and combinations of “human-wildlife coexistence”, “institution”, “social legitimacy”, “human-wildlife conflict”, “human-wildlife interaction”, and “partnerships” as search queries. Within the search results, peer-reviewed books and articles with the most citations were prioritised. Additionally, preference was given to works published in the last five years to ensure that the most current scientific discoveries formed the basis of this study.

Lastly, in line with the findings from the scientific literature review, a comprehension of the goals, strategies, core themes, stakeholders, organisations, partnerships, responsibilities and roles encoded in the PDs studied was gained. This knowledge was garnered following similar procedures as in the initial PD review and served as a reference point for the interview findings. Unlike the initial PD review, however, these latter results were now generally not backed by scientific literature since the intention was to describe the PD perspectives as they are.

3.4.2 Fieldwork Phase

To better understand the institutionalisation of seal rehabilitation on Green Beaches, semi-structured interviews were carried out. The main strength of semi-structured interviews is that they encourage two-way communication (Roulston & Choi, 2018; Boeije, 2010). As a result, interviewees were given the space to share their thoughts freely and the time to open up about sensitive topics (Kakilla, 2021; Brown & Danaher, 2019). This also allowed for the generation of ideas and the initiation of discussions that the researcher did not foresee.

Moreover, for the researcher, semi-structured interviews helped obtain detailed information about the reasons behind the respondents’ answers (Veríssimo et al., 2019; Roulston & Choi, 2018). Since the researcher was exposed to a wide range of viewpoints and thus answers, a holistic understanding of institutions for human-wildlife coexistence could be formed. This made semi-structured interviews an appropriate tool to seek answers to the main research question.

Most debates about semi-structured interviews in qualitative research traditionally centralise the question of “how many” responses suffice (Bazen et al., 2021; Hennink et al., 2017; Beitin, 2012). The most prevalent answer is a vague “it depends”. Factors blamed for causing this ambiguity include the characteristics of the population of interest, scope, purpose, available resources and analytical approach (Malterud et al., 2021; Bryman, 2012; Morse, 2000).

However, over the last few decades, researchers started to broaden their considerations about the “how many” question beyond the number of participants. This broadening involves incorporating as many different perspectives as possible. A commonly used approach to do this relates to people’s roles. “Asking who can provide a different perspective on a topic by nature of their role can be just as important as asking how many people are needed to answer the question”, thus Beitin (2012, p. 249). Keeping in mind that this study’s main research question hinges on stakeholders’ perceptions, data was thus collected until no new key stakeholders with new key roles emerged (i.e. saturation was reached). Moreover, at least one respondent was interviewed per identified stakeholder.

Duration and Location

The interviews were intended to last around 45-60 minutes and be conducted face-to-face since it allowed the researcher to respond to nonverbal cues. These cues could have been missed if the interview had taken place online (Heiselberg & Stępińska, 2022; Gray et al., 2020). Furthermore, the respondents were encouraged to choose a day, time and place most convenient to them to ensure their availability. The researcher also built in a buffer time of at least one hour to make certain the interview could commence at the given time and place. If the researcher arrived early at the location and this location happened to be the interviewee's workplace (e.g. a Seal Rehabilitation Centre), the researcher explored that place to familiarise themselves with topics the interviewees might bring up during the interview.

If the respondents expressed a willingness to participate but it was inconvenient for them to meet in person, the interviews were held through MS Teams video calls at a day and time of their choosing. This made the interviews easily accessible for the respondents. Online interviews were also regarded as suitable alternatives to face-to-face interviews because people had gotten used to the technical aspects of video conferencing during the COVID-19 pandemic (Self, 2021; Thunberg & Arnell, 2021).

Interview Guide

An interview guide was used to help the researcher conduct the interviews smoothly. Interview guides typically lay out the steps of the interview process and contain a list of questions (Roulston & Choi, 2018; Boeije, 2010). Since the interviews were semi-structured, the questions were, with one exception, open-ended and supplemented with prompts, and the order in which they were asked was flexible. A prompt refers to a topic the researcher wants to bring special attention to. Flexibility means that questions were skipped when a respondent had already answered them before they were asked. Nonetheless, when the respondents put forward a new topic the researcher found interesting, more questions were asked to gain in-depth insights into their values about that topic.

A vital purpose of the interview guide is to ensure reliability and validity (Roulston & Choi, 2018; Boeije, 2010). To ensure comparable and honest (i.e. reliable) results, the questions were the same during each interview and had to be non-leading. A slight difference, however, was made between the wording of the questions for the mediator and the other respondents: while the rest were asked about their own perceptions, the mediator was specifically asked about their understanding of the perceptions of the stakeholders involved in the 2021 dispute settlement. This was due to the intent to use the mediator's insights to further validate the answers of the other respondents, especially those who were involved in the dispute.

The accuracy or validity of the results was also taken care of by the formulation of clear and concise questions using terminology from the studied PDs and literature as references. To check the clarity of these questions, a test interview was conducted with a layman. Their feedback was used to refine the phrasing of the questions.

Furthermore, during the interviews, the researcher took handwritten notes. This aided in recalling and probing for a deeper understanding of what was said (Roulston & Choi, 2018; Boeije, 2010). Notes were also taken in the form of audio or, when conducted online, video recordings to ensure the interviewees' responses were accurately captured in their own

words. If the answers were written down in the researchers' words, the interview data could be interpreted differently than the interviewees intended and hence be less accurate.

The complete interview guide is available in [Appendix B](#) (p. 94). Meanwhile, [Tables 2-4](#) (pp. 22-23) depict how the conceptual model and findings from the PD review were mainly translated into interview questions.

Table 2. Development of interview questions concerning the PD's output legitimacy

PD	Focus as per literature review	Focus of special attention emerging in the PD	Interview question
TGB	Ideal goals for managing human-wildlife interactions, beach management, seal conservation and rehabilitation, and the most efficient strategies for achieving them	a. N/A b. N/A c. people who disturb the seal or threaten with violence	a. What goals would you ideally like to achieve in terms of enhancing human seal interactions and beach management? b. What do you consider the most efficient strategy(s) to achieve the goal(s)? c. What do you consider the most efficient strategy for handling situations where bystanders disturb the animals or threaten with violence?
SRA	"	a. rehabilitating seals in a centre or on the beach b. N/A c. N/A	a. Do you have a preference for rehabilitation in a centre or on the beach? b. What goals would you ideally like to achieve in terms of seal rehabilitation and conservation? c. What do you consider the most efficient strategy(s) to achieve the goal(s)?
TRAs	"	a. N/A b. people who disturb the seal or threaten with violence	a. What do you consider the most important tools needed to set up a TRA? b. What do you consider the most efficient strategy for handling situations where bystanders disturb the animals or threaten with violence?

Table 3. Development of interview questions concerning the PDs' input legitimacy

PD	Focus as per literature review	Core themes encoded in the PD	Interview question
TGB	Preference or perceived importance concerning the PD's core themes	a. needs of beachgoers b. the beach as a place where animals and humans (and plants) can reside together	What is your perception of beachgoers' needs and simultaneous use of beaches by humans and stranded seals?
SRA	"	a. stranded seals' needs b. human intervention in seals' lives c. minimising unnecessary & unbearable suffering d. seal conservation	What is your perception of [core theme]?
TRAs	"	a. needs of beachgoers b. needs of seals	"

Table 4. Development of interview questions concerning RRP

Key term	Focus as per literature review	Interview question
Responsibilities	Actions and situations dealt with	Could you talk about your responsibilities as [role]?
Roles	General position in/of an organisation	"
Partnerships	Collaborations between two or more stakeholders/organisations	Could you talk about collaborations with other organisations?

The theory behind the composition of Tables 2-4 (pp. 22-23) is that to know if a PD is socially accepted, its encoded RRP and input and output legitimacy should be compared with stakeholders' perceptions of these elements. This theory is a direct reflection of the theory summarised in the conceptual model on page 16.

While reading Tables 2-4, note that Green Beach policy has been abbreviated to "TGB" for better readability. Furthermore, regarding output legitimacy, two strategies of special attention surfaced in the SRA: (1) handling people who disturb a seal or threaten with violence and (2) the default location for seal rehabilitation (i.e. beaches or Seal Rehabilitation Centres). Therefore, additional questions were formulated concerning perceptions of the best strategies to handle such people and the preferred seal rehabilitation location.

Lastly, to aid the interviewees in distinguishing between the PDs, the interview questions about output legitimacy concerning the SRA mainly focussed on seals and those linked to TGB and TRAs on seals and humans. As such, the additional question regarding handling people who disturb a seal or threaten with violence was posed in relation to TGB and TRAs. This also meant that questions concerning the SRA were asked first, those about TGB second and TRAs the last. However, the extra question about the preferred location-related strategy remained tied to the SRA.

Regarding the interview questions about input legitimacy, the distinction made between the PDs did not affect the formulation of questions regarding the SRA, TGB and TRAs.

However, it must be emphasised that one core theme encoded in TGB – the needs of seals – was omitted from the interview questions. This was done for a reason unrelated to the PD distinction. The reason was that while the needs of beach animals appeared as a core theme within TGB, the needs of seals were not specified. Besides, as the core themes of the SRA and TRAs already covered the needs of seals, it was assumed that the insights gained in their contexts would be sufficient to fill in the blanks in that of TGB. Accordingly, the theme of the needs of seals was intentionally omitted from interview questions concerning TGB.

3.5 Data Analysis

After the last interview was conducted, data analysis commenced. The data analysis consisted of four phases and was based on Boeije's (2010) guidelines for doing qualitative research. In the first phase, the researcher manually transcribed the interview recordings word for word. Each transcript was written in a separate Word document. This helped to maintain a clear overview of the data. Besides, each interviewee was assigned a referral code (see [Appendix A](#), p. 92). In this way, they could be easily identified and differentiated from each other, bolstering the reliability and validity of the transcripts.

Additionally, the researcher ensured the validity of the transcripts by relistening to the recordings while reading through them. Respondents were subsequently engaged in the validation process. They were asked to check their interview transcript for errors or missing information and, occasionally, to clarify or add more details to their initial responses.

Some respondents, alternatively, preferred to review the Results Chapter. In those cases, they received a full draft version highlighting text relevant to their responses in yellow and were asked the same things as those who proofread the transcripts.

In the second phase, the researcher broke down the data of all transcripts into discrete parts using open coding. A code is a word or short phrase mainly dealing with one topic. Each open code was derived in-vivo (i.e. in the respondents' words) and from the PD and literature review.

The open codes specifically targeted text fragments that built on the findings from the PD and literature review. Moreover, the text fragments were exported to a Microsoft Excel document: one tab contained the text fragments related to one interview question. The referral code was noted in the first column of each tab, the open code in the second column and the corresponding piece of text in the third column. This allowed for the maintenance of a clear overview of the coded data.

In the third phase, connections were drawn between the codes. This process is called axial coding and involves the researcher grouping codes into categories. The main benefit of axial coding was that it helped the researcher distinguish dominant codes from less important ones.

The final data analysis phase was selective coding, meaning axial codes were combined into core categories. A core category is a word or short phrase representing a narrative that recurs in the data. Each group of axial codes that captured one narrative was assigned to a core category. [Appendix C](#) (p. 107) shows which axial codes were grouped under which category. Open codes were only integrated into the Results Chapter to condense the length of the Appendix.

It should be emphasised that the coding was carried out by one researcher. To increase the reliability and validity of the data analysis, the researcher stuck to the respondents' own words as much as possible. Moreover, interview transcripts were carefully analysed until no

new codes emerged and the researcher was convinced that each piece of text was assigned to the right code.

3.6 Ethical Considerations

3.6.1 Creating a Comfortable Atmosphere

The semi-structured interviews required respondents to talk about deeply held values over wildlife. As such, these conversations could involve sensitive topics. To create an atmosphere where the respondents felt comfortable sharing their perspectives, they were contacted over email (see [Appendix D](#), p. 121) before the interview to manage expectations and make personal connections.

Furthermore, the respondents were always addressed in their native language (Dutch) and promised that the information they shared would remain confidential. Anonymity was ensured, meaning their identities were not revealed in this report unless permission was given.

On the flip side, this study needed disclosure of generic terms for the respondents' roles and responsibilities. This was explained to the respondents at the beginning of the interviews and done to acknowledge the importance of their work and to give them a voice, something that otherwise may have been marginalised and hard to piece together (Husband, 2020; Surmiak, 2018).

Respondents were also asked for their permission to record the interview and it was made clear that they "should suffer no loss of professional standing, or suffer personal distress" (Husband, 2020, p. 7), so that they could give informed consent. Moreover, participation in this study was voluntary. The researcher explained this to the respondents beforehand and highlighted they could withdraw from the study at any time without needing to provide a reason for it.

Lastly, the researcher gave the respondents thank-you gifts to show appreciation for their participation. These gifts comprised a digital copy of the report, an invitation to the colloquium, and an opportunity to attend a presentation and discussion about the research findings at Natuurmonumenten's office in Goedereede.

3.6.2 Researcher Reflexivity

Besides the comfortable atmosphere, the researcher also considered their own reflexivity. "Given the integral role that the interviewer plays in conducting the interview and gathering and interpreting the data" (Magaldi & Berler, 2020, p. 4826), this resulted in the writing of self-reflection memos in a journal (see [Appendix E](#), p. 122) throughout the preparation of the interview guide to detect and manage personal biases. The researcher's epistemology (i.e. how they know what they know) shapes their positionality and hence influences their research. Memos were also written directly after the interviews ended since the things the respondents said could have influenced the emotional state of the researcher (Melville & Hincks, 2016; Dickson-Swift et al., 2008).

3.6.3 Avoiding Extraneous Information and Emotional Distress Management

During the interview itself, moreover, ethical guidelines required skills of the researcher concerning the amount of information they collected and dealing with respondents who

became emotionally distressed (Magaldi & Berler, 2020; Melville & Hincks, 2016). As such, the researcher used the interview guide to avoid the gathering of unnecessary details. The respondents' distress was addressed by giving them time to express their thoughts, allowing them to skip a question, and explaining that they may change their minds about the information the researcher may use for this study after the interview.

In addition to using the interview guide, the researcher aimed to reduce distress by taking a neutral position and studying the respondents' affiliated organisations. This aided in understanding their circumstances better and thus in building rapport during the interactions.

3.6.4 Position of Geert Faasse

On a final note, Geert Faasse was embedded as the gatekeeper in this study since he understood and had already built relationships with the respondents studied. He initially became involved through a tip from Eef de Graaf, a Zierikzee-based artist whom the researcher met while collecting data for an internship on harbour porpoise watching. Eef asked if the researcher wanted to feature in her short film on a local whale watching hotspot. After recognising the researchers' passion for projects about tourism and sea mammals, she suggested seal rehabilitation on Green Beaches could be an interesting thesis topic. Moreover, she introduced Geert as someone who could share more background information and the contact details of suitable respondents. The researcher eagerly took this opportunity, eventually leading to this thesis project.

Regardless, Geert's position meant the results could be influenced (Husband, 2020): some respondents might have been more inclined to participate in this study than others when the researcher mentioned his name. This was dealt with by referring to the beach being studied instead of Geert to those Geert thought would be reluctant to participate when hearing his name.

Another possible influence was that those who knew Geert were more at ease during the interview because of the mutual connection and may have shared information that they thought Geert wanted to hear. The issue was tackled by clarifying the role of Geert in helping the researcher get in touch with respondents. Additionally, the researcher emphasised their interest in the respondents' own opinions and the principle that every answer is a good answer.

4 Results

This chapter details the main findings of the semi-structured interviews and the PD review using the conceptual model (see [Figure 6](#), p. 16) as a backbone. Accordingly, Section 4.1 elaborates on the responsibilities, roles and partnerships involved in seal rehabilitation at De Kwade Hoek. Afterwards, the input and output legitimacy of the PDs under study are described. This will be done such that each section focuses on a different PD: Section 4.2 centralises the SRA, Section 4.3 Green Beach Policy and Section 4.4 TRAs.

Additionally, this chapter uses the codes I1-I11, A and T to quote interviewees. These codes correspond to the individuals listed in the overview of interviewees in [Appendix A](#) (p. 92). Moreover, while the codes A and T are mainly used in *tables* for layout purposes, they are also referred to as Ad (A) and Tineke (T) *in text* for clarity.

4.1 Responsibilities, Roles and Partnerships

This section presents Green Beach policy and the SRA's interpretations of the responsibilities, roles, and partnerships involved in seal rehabilitation at De Kwade Hoek as well as the interviewees' interpretations within these PDs' contexts. The interpretations of the PDs will be described in Section 4.1.1 and those of the interviewees in Section 4.1.2. Interpretations relating to TRAs are intentionally postponed until Section 4.4.3.

4.1.1 Policy Design Review Findings

Green Beach Policy

Green Beach policy states that a beach community, beach manager, municipality and, if present, other parties with a stake in beach management like a beach pavilion, actively work together to protect a beach's biodiversity and offer opportunities for people to experience the animals and plants living on that beach (Het Groene Strand, n.d.-a, n.d.-b). This collaboration is established and maintained by the beach community. They pursue the goals of TGB (see p. 3) and stimulate the beach manager, municipality and other involved parties to make agreements on beach management that support these goals. Within the confines of the agreements, the beach community cleans the beach, cordons off resting areas for birds and monitors biodiversity. Members of the beach community are also expected to follow TGB's training on how to tell stories about animals and plants living on the beach they manage so that they can involve beachgoers in their work (Het Groene Strand, n.d.-c).

In the context of De Kwade Hoek, as Section 1.5 (p. 6) specified, the beach community comprises NLGO, the beach manager Natuurmonumenten and the municipality Goeree-Overflakkee. Furthermore, Green Beach policy assigns the responsibility for training and project management to Zuid Hollands Landschap (Het Groene Strand, n.d.-d), something Section 1.5 did not specify. Having described responsibilities, roles and partnerships from the perspective of Green Beach policy, the next section will shift focus to that of the SRA.

The Seal Rehabilitation Agreement

In the SRA is written that seal guardians play a pivotal role in seal rehabilitation. [Table 5](#) on the next page shows what parties enable them to perform their job. Among these parties, those typed in [blue](#) are most directly involved in seal rehabilitation at De Kwade Hoek and consequently central to this study. The remainder of this section will provide an overview of

the responsibilities, roles and partnerships regarding all the parties listed in Table 5, as described in the SRA. This is done to show the bigger picture the studied parties are part of.

Table 5. Overview of signatories of the SRA: studied ones (blue) versus omitted ones (black)

Coastal Province	Seal Rehabilitation Centre	Marine Mammal Rescue Organisation	Other
Groningen	Stichting A Seal Centrum voor Zeezoogdierenzorg	Stichting Eerste Hulp Bij Zeezoogdieren (EHBZ)	Minister of Agriculture, Nature and Food Quality
Friesland	Stichting Texels Museum (Ecomare)	Stichting ReddingsTeam Zeedieren (RTZ)	Partnership of West Frisian Islands
North Holland	Stichting Zeehonden-centrum Pieterburen		Association of Wadden Sea Municipalities
South Holland	Stichting Zeehonden-opvang Eemsdelta		Mediator (note: did not sign the SRA)
Zeeland	Stichting Zeehonden-opvang Terschelling		

Note. Adapted from “Seal Rehabilitation Agreement”, 2020, p. 2 (<https://open.overheid.nl/documenten/ronl-43380cc3-b552-415b-bc7e-0d0b99334946/pdf>).

Party 1: Seal Rehabilitation Centres (SRCs) – Rehabilitating Seals in The Netherlands

The SRCs consist of A Seal, Ecomare, Pieterburen, Eemsdelta and Terschelling. Each SRC is exempt from the ban mentioned in the Wet Natuurbescherming (the Dutch Nature Conservation Act) on the capturing and killing of seals in their habitats. Their primary responsibilities lie in making informed decisions regarding the rehabilitation procedures for seals that strand in their work area (see Appendix F, p. 123) and hospitalising those that need medication or carry a zoonotic disease. If multiple SRCs cover the same work area or a stranded seal swims from a beach in one SRC’s work area to that of another, the SRCs make agreements concerning collaboration and coordination.

However, as the website of Pieterburen (n.d.) clarifies, not every SRC’s buildings, employees and volunteers are immediately available to aid a stranded seal. This means that not every SRC is operational. Accordingly, the ones connected to seal rehabilitation at De Kwade Hoek can be reduced to A Seal, Pieterburen and Ecomare. Moreover, of these three SRCs, as already shown in Figure 5 (p. 6), A Seal is closest to De Kwade Hoek.

Party 1a: Veterinarian or Professional Animal Keeper – Providing Medical Treatment to and Euthanising Stranded Seals, and Final Responsibility for Handling Stranded Seals

Veterinarians or professional animal keepers work for an SRC and have the final responsibility for handling seals. Concretely speaking, this denotes that seal guardians must always contact a professional animal keeper or veterinarian before they handle a stranded seal. It also entails that only animal keepers or veterinarians may provide medical treatment to stranded seals, that only veterinarians may euthanise seals, and that the people authorised to handle stranded seals are limited to seal guardians, veterinarians and professional animal keepers.

Party 1: Seal Rehabilitation Centres (SRCs) (continued)

Party 1b. Seal Guardians – Documenting, Marking, Observing, Capturing, Moving and Releasing Stranded Seals, Informing Beachgoers About Seals and Cordoning Off Areas

Seal guardians are either volunteers, contractors or professionals who have undergone training at an SRC in handling stranded seals and possess a seal guardian certificate. For each stranded seal, they conduct an initial analysis to assess the need for rescue or whether observation and/or relocation suffice. They use this analysis to advise the veterinarian or professional animal keeper of their affiliated SRC on the appropriate rehabilitation procedure. Furthermore, they document the exact location where the seal was found, its physical condition and the actions they have taken. These actions may involve marking, observing, capturing, transporting and releasing the seal. Should the observation period extend beyond the default 24 hours, they document and file this to the SRC.

In addition to their seal-focused duties, seal guardians also take on an educating role. When bystanders are present, they inform them about the animal and caution against disturbing it. In cases where too many bystanders cause a disturbance, they also have the authority to follow all strategies shown in Section 1.3 (p. 4) except enforcement.

Party 2: Marine Mammal Rescue Organisations (MMROs) – Rescuing Seals in the Netherlands

The MMROs encompass EHBZ and RTZ. Each MMRO employs seal guardians and works independently and throughout the Netherlands, excluding Texel. Moreover, the MMROs are meant to merge into one organisation and work closely with the SRCs to pool resources, experiences and knowledge, improve assistance to seals and ensure uniform implementation of the SRA. Emphasis is put on *meant* since EHBZ started to work dependently on the SRCs instead of RTZ after the 2021 dispute settlement.

Party 3: Minister of Agriculture, Nature and Food Quality – Permitting SRCs to Capture and Kill Seals, Amending the Wet Natuurbescherming, and Funding Implementation of the SRA

The Minister of Agriculture, Nature and Food Quality grants SRCs permission to capture ill and wounded seals and kill those that suffer unnecessarily and unbearably. If necessary, the minister can also amend the Wet Natuurbescherming to ensure better alignment with the SRA. Lastly, the minister contributes financially to the implementation of the SRA. This involves setting up seal guardian training, researching the survival chances of seals with lungworm and drawing up a communication plan. A communication plan is a written document detailing uniform procedures that SRCs and MMROs should follow when disseminating information related to the SRA's core themes to the public as well as other groups like tourists. However, this plan was not available at the time of this study.

Party 4: Coastal Provinces – Granting SRCs and MMROs Permission to Relocate Seals and Release them into the Sea, and Funding the Implementation of the SRA

The coastal provinces include Groningen, Friesland, Zeeland and North and South Holland. They authorise SRCs and MMROs to relocate stranded seals and return rescued ones to the sea. Furthermore, they collaborate with the Minister of Agriculture, Nature and Food Quality to finance the implementation of the SRA. According to a parliamentary letter, the allocated budget for this initiative is capped at €1.2 million (Schouten, 2020).

Party 5: Partnership of West Frisian Islands – no further information mentioned

Party 6: Association of Wadden Sea Municipalities – no further information mentioned

Another party the SRA mentions but which, unlike the above parties, is not a signatory to it, is a mediator. An overview of the mediator's responsibilities, roles and partnerships:

Party 7: Mediator – Strengthening Partnerships and Trust between SRCs and MMROs

A mediator is an independent person. This person is designated by the Coastal Provinces and Minister of Agriculture, Nature and Food Quality, and strengthens partnerships and trust between SRCs and MMROs. This implies that the independent person chairs biannual meetings on the progress of the SRA's implementation between all signatory parties and that SRCs and MMROs can ask the independent person for an advisory opinion or mediation in case of a dispute. Regardless of whether advice or mediation is sought, SRCs and MMROs should report all disputes and accept the independent person's opinion.

So far, there has been one dispute. This dispute was reported to the mediator on 28 January 2021 and concerned the following issues (Schouten, 2021):

1. The planned merger between EHBZ and RTZ (the two active MMROs)
2. Compliance with the agreements on seal rehabilitation by seal guardians

To clarify, conversations between the mediator and the parties involved have revealed that various seal guardians of one of the MMROs performed their tasks without training, experience and/or direct supervision. The conversations also revealed that the underlying motive of the SRA to bring fewer seals into SRCs (which Section 4.2 will further clarify) was not always coming through in the behaviour of seal guardians of that same MMRO. Examples of such behaviour involved active driving on the beach in search of seals and nightly driving on beaches in response to reports of strandings.

At the end of March 2021, based on the conversations, the mediator concluded that the planned merger between the MMROs should be temporarily suspended (Schouten, 2021). In addition, several responsibilities and roles were further clarified. Main clarifications include:

- All reports received by individual seal guardians, MMROs and regional animal ambulances always need to be directly passed on to an SRC
- Seal guardians are managed by SRCs, without the intervention of MMROs. This means the operational SRCs always determine what happens when an ill, lone or injured seal is reported, and seal guardians carry out that decision
- To carry out their tasks well, seal guardians get access to training. Besides, as the training requires practical experience in handling seals, those without experience must shadow an experienced seal guardian before they may work independently
- All seal guardians stop driving on the beach between dusk and dawn to ensure it is quiet on the beach at night. In the daytime, if it is determined that a stranded seal needs to be brought to an SRC, it should be done as quickly as possible. Without explicit order of an SRC, it is thus not allowed to temporarily keep a seal in a building or bathtub

Placing the mediator's conclusion, the seal guardians' disregard of agreed behaviours and the lack of emphasis on the disputing parties' perceptions of seal rehabilitation procedures in the settlement notes in light of Chapter 2's CCT framework (see p. 11), this study lastly assumes that the current situation for human-seal interactions in the Netherlands is an L1-L3 conflict.

4.1.2 Interview Findings

Shifting attention from the PDs' perspectives to that of the interviewees, the interviewees also shared their perceptions of responsibilities, roles and partnerships involved in seal rehabilitation at De Kwade Hoek. [Figure 7](#) provides a summary of these perceptions.



Figure 7. Overview of the responsibilities, roles, and partnerships involved in seal rehabilitation at De Kwade Hoek. The partners: TGB (No. 1), GO Goeree-Overflakkee (No. 2), NLGO (No. 3), DierenLot (No. 4), Natuurmonumenten (No. 5), the municipality of Goeree-Overflakkee (No. 6), RTZ (No. 7), mediator Tineke Schokker (No. 8), EHBZ (No. 9), Ecomare (No. 10), A Seal (No. 11), and Pieterburen (No. 12)

In [Figure 7](#), interviewees' perceptions of the responsibilities and roles regarding seal rehabilitation at De Kwade Hoek are identified as observing seals, marking seals, information/education/communication, transporting/disposing of seals, treating seals, coordination/facilitation/mediation, cordoning off an area and administration. Furthermore, [Figure 7](#) shows how these responsibilities and roles were linked to partnerships involving TGB, NLGO, GO Goeree-Overflakkee, Natuurmonumenten, the municipality of Goeree-Overflakkee, EHBZ, RTZ, A Seal, Pieterburen, Ecomare, DierenLot and mediator Tineke Schokker. The remainder of this section will elaborate on these findings in relation to Green Beach policy and the SRA.

Green Beach Policy

I6 noted that “marine mammals are also part” of TGB’s goals to boost beach biodiversity and offer human experiences with that biodiversity, yet “seal rehabilitation is not a primary action”. Looking at [Figure 7](#) (p. 31), this means it is up to the beach community (NLGO), beach manager (Natuurmonumenten), and the municipality (Goeree-Overflakkee) what they want to do apropos of seal rehabilitation. So far, on-site, they got to place a sign and use oral storytelling to raise awareness among beachgoers about beach ecosystem dynamics, which includes seals.

Elaborating on oral storytelling, in the portrayed situation, volunteers from NLGO’s Education Group said that this is their main responsibility and includes that they tell beachgoers stories about beach ecology dynamics while standing on the beach with an information cart or during excursions (see [Appendix G](#), p. 124). The handshake icon in [Figure 7](#) (p. 31) also signifies that the storytelling responsibility of these volunteers is enabled by Natuurmonumenten, which allows them to work at De Kwade Hoek. Additionally, the handshake icon signals that TGB trains them as guides and offers funds and educational materials for the cart. GO Goeree-Overflakkee, NLGO’s other key partner, promotes and administrates the excursions (see paper and information icons in [Figure 7](#)).

Looking ahead, however, I6 mentioned that the establishment of TGB ends in 2025. This means NLGO’s volunteers must turn to the municipality for funds from then onwards.

The Seal Rehabilitation Agreement

From the SRA’s angle, a permit is the gateway to handling seals at De Kwade Hoek. The coordinating role assigned to Natuurmonumenten in [Figure 7](#) tells that they issue these permits.

As permit holders, the municipality and seal guardians are responsible for disposing of washed-up carcasses. The information icon that [Figure 7](#) assigned to them clarifies that this assumes the municipality always contacts a seal guardian before acting, or that when they act, they consider the needs of NLGO and tourists as well as their own preference to “leave [carcasses] as long as possible on the beach or else bury them” (I7). Furthermore, the icon signifies that the seal guardians always inform A Seal before bringing in a carcass. This is due to A Seal having the final responsibility for handling seals, including recording seal strandings.

If the stranding involves a live seal, only seal guardians may handle it. Like the carcass case, though, they must do this in consultation with A Seal. Natuurmonumenten specifically chose EHBZ’s seal guardians as partners as “they are closer [to De Kwade Hoek] than RTZ” (I3).

The references highlighting A Seals’ final responsibility for handling seals hint that A Seal also functions in a coordinating capacity. This works as follows: seal guardians are “the eyes and ears of an SRC” (I1). They go to the beach to take photos and videos of a reported stranded seal. Usually, a stranding is submitted by beachgoers, the municipality or Natuurmonumenten.

The information icon next to EHBZ and A Seal in [Figure 7](#) explains that seal guardians are tasked with sending footage and advice regarding the reported animal to A Seal. An animal keeper of A Seal then decides what happens based on their own estimation and the information provided by the seal guardians. If in doubt, A Seal’s veterinarian is asked for a second opinion. I7 highlighted that A Seal makes the final decision since they have the in-house knowledge to establish the animal’s situation and needs. In addition, they have the final say as they are “financially fully independent. They do not receive subsidies . . . [and] as the animal will eventually come to their SRC, they also bear all costs for the treatment of that animal” (I7).

If it concerns a live seal and the animal keeper opts for admission, the ambulance icon beside EHBZ in [Figure 7](#) (p. 31) signifies that seal guardians capture and transport it to A Seal. If there is no room at A Seal, the same information icon indicates that the seal will be brought to another SRC in consultation with that SRC. Once arrived, the SRC's veterinarian checks if it is microchipped and what treatments or therapies it needs. Thereupon, the treatments or therapies are carried out and carefully documented in collaboration with the SRC's animal keepers (see cross and paper icons in [Figure 7](#)). When the seal is fully recovered, the ambulance icon beside EHBZ signals that it is released at a nearby beach or De Kwade Hoek.

An animal keeper can also decide that the seal stays on the beach. As per the pin and binoculars icons beside EHBZ in [Figure 7](#), seal guardians mark the animal with a biodegradable spray using a unique colour (i.e. yellow for seals found in South Holland) and pattern of dots or lines and observe it for 24 hours. If there are bystanders, the seal guardians can also inform them about seals. This is represented by the information icon in [Figure 7](#).

Moreover, the tape icon in [Figure 7](#) symbolises that seal guardians can use ribbons and information signs to cordon off a part of De Kwade Hoek when it is crowded with people. Alternatively, if the seal is found at another beach and that beach is crowded, the ambulance icon in [Figure 7](#) tells that the seal can be brought to De Kwade Hoek for observation. According to I1 and I2, Green Beaches are especially suitable for observation as they are less crowded, allowing seals to rest quietly.

When the observation period has passed, seal guardians send new footage and advice to A Seal (see information icon in [Figure 7](#)). An animal keeper of A Seal subsequently decides if the seal should be taken in, observed for another 24 hours or does not need further help.

Sometimes, it also happens that the marked seal swims away in the observation period and surfaces in another SRC's work area or swims from another SRC's work area to A Seal's. In such cases, the SRCs exchange information on the seal to ensure it receives the help it needs (see information icon in [Figure 7](#)). Besides, the handshake icon in [Figure 7](#) indicates that the SRCs collectively draft uniform texts for press releases and train seal guardians. Regarding seal guardians, additionally, the ambulance icon beside Ecomare underscores that its animal keepers also serve as seal guardians. This contrasts with the other SRCs: they work with RTZ and EHBZ's seal guardians.

Also, with the help of mediator Tineke Schokker (hereafter referred to interchangeably as T and Tineke), all SRCs and MMROs used WAZ's report to establish, comply with and evaluate the SRA. [Figure 7](#) visualises this via the handshake icon. Delving deeper into the SRA's establishment, Tineke mentioned that it took her over two months because all involved parties do their work "with feeling, with passion. And when feelings and passion are involved, emotions run high too . . . and [as] some had the idea I was going to take something away, we repeatedly had to say . . . 'yes, but you are doing this in the seal's interest'". Some parties also "really had to learn . . . seals lie on the beach . . . and not every seal we encounter, every pup" (T) needs to be brought to an SRC. Tineke clarified these lessons had to be learned since "people generally want to help". Especially the "understanding you otherwise make [pups] an orphan" helped her to teach the lessons.

Regarding compliance with the SRA, Tineke noted that "you would expect all people who work with seals do so shoulder to shoulder because they all share the same goal: doing the right thing for the seal . . . but sometimes they see each other more as a competitor than a colleague". Namely, when she spoke to the stakeholders involved in the 2021 dispute

settlement, “they accuse[d] each other of exactly the same thing[s]”, such as bringing mud-fat seals to an SRC and unnecessary driving on the beach. Her key compliance-oriented task as mediator thus includes reminding stakeholders to abide by the SRA when they fail to take care of this themselves. Usually, this means saying “we understand your passion, that you want to do something [to help the seal], but sometimes doing nothing is the best” (T).

As to evaluating whether the SRA works in practice, Tineke specified she facilitates conversations on encountered difficulties. Additionally, she helps SRCs and MMROs to improve the contents of the SRA.

Lastly, the organisation of DierenLot surfaced (see partner No. 4 in [Figure 7](#), p. 31). Even though they did not sign the SRA, they adhere to it and are involved in its creation from the start. Therefore, Tineke “would have preferred they also signed”. In the current situation, however, she thinks DierenLot’s involvement is illogical “as they are neither an SRC nor seal guardian”. Instead, they provide RTZ resources like funds, animal ambulances and a knowledge network (see question icon in [Figure 7](#)).

I1 and I2 explained that the close cooperation between RTZ and DierenLot is due to the fact that RTZ, unlike EHBZ, rescues marine animals in general and operates independently of SRCs. RTZ’s multi-species orientation and independence were also brought up as reasons why RTZ’s seal guardians chose to record at the website <https://waarneming.nl/> where they found dead and live stranded seals (see paper icon in [Figure 7](#)).

When looking at [Figure 7](#), moreover, remember that RTZ does not have a permit to work at De Kwade Hoek. This means they may get involved in seal rehabilitation when a seal under observation swims from De Kwade Hoek to another beach for which they have a permit.

4.2 Social Legitimacy of The Seal Rehabilitation Agreement

The aim of this section is to describe the SRA’s input legitimacy. This will be done following the pathways of input legitimacy (in Section 4.2.1) and output legitimacy (in Section 4.2.2). Within these pathways, in line with the section on responsibilities, roles and partnerships, the first leg will focus on the PD’s interpretation and the second on that of the interviewees.

4.2.1 Input Legitimacy

Policy Design Review Findings: Encoded Core Themes

Theme 1: Stranded Seals’ Needs

The SRA’s backbone is formed by the Seal Rehabilitation Framework (SRF). This framework can be found in [Appendix H](#) (p. 126) of this report and distinguishes between situations on the one hand and procedures for dealing with these situations on the other. Following this distinction, stranded seals are also equated with situations and their needs with procedures. Stranded seals thus encompass trapped and injured seals, suckling pups without a mother nearby, weaned seals, mildly ill seals and seriously ill seals. Their overall need is viewed as room and time to naturally recover in the place they live, which in the case of this study is the beach. However, if they get in trouble due to human actions or are seriously ill, the SRF says they also require help from humans in their recovery. Where the rationale behind human intervention follows in Theme 2, the rest of this section will further specify stranded seals’ needs and the corresponding rationales.

Regarding trapped or injured seals' needs, the SRF states they first and foremost require human assistance. For example, this means that the fishing nets entrapping the seal shown in [Figure 8](#) must be removed. When chances are high that the seal will recover independently, the SRF mentions leaving it on the beach afterwards, preferably on the one where it was found.



Figure 8. A grey seal pup trapped in fishing nets.
Photo: RTZ Nederland, 4 February 2020.

Like trapped and injured seals, the SRF mandates that suckling pups without a mother nearby, weaned seals, and mildly ill seals with high survival chances require room and time to recover on the beach where they are stranded. This requirement, termed observation, involves a 24-hour period where seal guardians watch if a stranded seal recovers naturally or expresses normal behaviour. The observation period starts right after the seal guardians have marked the animal. In the 2003 Seal Rehabilitation Guidelines and Protocols (the SRA's predecessor), this period used to be 2 hours for harbour seals and 24 hours for grey seals.

The 2 and 24-hour periods are no longer in use since WAZ's interviews with seal experts from the Bedford Institute of Oceanography (Canada), Aarhus University (Denmark), The Marine Mammal Centre (United States of America), and the University of Veterinary Medicine (Germany) show that 24 hours presents a better window of opportunity for natural recovery and mother-pup reunions (Van der Zande et al., 2018). Besides, the seal experts said 12 hours (one tidal cycle) would be better as that is the time up to which mothers abandon their young. However, WAZ considers 12 hours impractical "because this would imply taking pups during the night, which would be very disturbing for the pup and other animals (e.g. because of using lights)" (Van der Zande et al., 2018, p. 4). The seal expert from The Marine Mammal Centre mentioned that a 24-hour observation period rules out the risk of mother-pup separations and activities at night. Moreover, he said this timeframe is the standard procedure for harbour seal rehabilitation in the United States of America. As a result, WAZ, and subsequently the SRF,

adopted a 24-hour observation period as the default rehabilitation procedure for both stranded harbour and grey seals.

During the observation period, WAZ and the SRF also emphasise that stranded seals need to be given room by humans to recover. WAZ's literature study (e.g. Lander et al., 2002; Kovacs, 1987) found that the main reason behind this – which the SRF omits – is that they may bite in self-defence. After all, seals have sharp teeth as they are predators. While suckling pups and weaned seals are generally approachable, it is according to WAZ thus crucial to never confuse this with their need to be left alone during recovery.

Then there is the special case of suckling pups and their mother. Starting with the mothers, findings from WAZ's literature study (e.g. Groothuis, 2017; Schaeff et al., 1999) and expert interviews indicate that they typically flee into the water when approached too closely by humans. This response can cause the mother seal to miss an entire tide or 50% of their daily rest or nursing time. The likelihood of recovery consequently decreases for both adults and suckling pups when their need for space is ignored. However, similar to the predator-related finding, the SRF refrains from adopting WAZ's findings.

In situations where the seal is seriously ill, the SRF states it is directly admissible to a Seal Rehabilitation Centre. As a rule of thumb and based on WAZ findings, this indicates that the seal needs some form of medical treatment that cannot be administered on the beach or may carry a disease that can spread to other animals and humans (i.e. a zoonosis) (Van der Zande et al., 2018). The reason behind this indication is related to human intervention in seals' lives and seal conservation and will consequently follow in Themes 2 and 4.

Lastly, the SRF also applies the indicators for identifying seriously ill seals to those kept under observation. This implies that if it becomes evident within the 24-hour period that the seal needs treatment not feasible on the beach or may carry a zoonotic disease, except when it is weaned, it will be reclassified as seriously ill and admitted to an SRC.

Theme 2: Human Intervention in Seals' Lives

The SRF is linked to the theme of human intervention in seals' lives. This theme is borrowed from WAZ's report and says that human intervention in seals' recovery from illnesses and normal biological processes and behaviour is harmful. WAZ's rationale behind this theme is twofold and stems from a literature and data review of seal rehabilitation and strandings. The remainder of this section will elaborate on the found rationales.

Firstly, regarding ill seals, WAZ argues that human intervention should be minimised as it can disrupt natural selection, strengthen disease transmission and create unnatural feeding-related advantages. Reviewing WAZ's report, their argument about natural selection relies on studies from Acevedo-Whitehouse et al. (2018), Browning et al. (2014), De Assunção-Franco et al. (2012) and various others. In these studies, natural selection is found to be disrupted because human rescue and release of large ill seal numbers leads to seals with unfavourable genetic variations staying in the population. These variations, WAZ thus concludes, would naturally be removed if humans refrain from helping ill seals.

In support of the argument about enhanced disease transmission, WAZ highlights that releasing seals aided by humans in their recovery from a disease can spread that disease within the population and to humans and heighten reinfection chances. The studies they reviewed to

make the point about reinfection (e.g. Ulrich et al., 2016; Lehnert et al., 2010) speculate³ that chances of reinfection are especially high for seals diagnosed with lungworm. A lungworm is a parasite commonly contracted by young seals when they begin eating fish. According to the studies reviewed, there are two causes for reinfection with this parasite. One suggests that seals may have adopted feeding strategies that increase their exposure to the parasite. The other links reinfection to a genetic predisposition, a factor associated with natural selection. Accordingly, WAZ concludes that human intervention in seals' recovery from lungworm could harm the gene pool of the population and should thus be restricted.

WAZ also examined public aerial survey data of Dutch seal populations and seal strandings available on <https://waarneming.nl/>, a public online database also utilised by Brasseur (2018). The analysis showed that helping undernourished seals creates unnatural feeding-related advantages during periods of limited food resources. As a result, WAZ reasons that seals living in the sea may face extra difficulties finding food, while those provided by humans have easier access, a scenario they think should be prevented.

Secondly, specifically for suckling pups weaned seals, WAZ uses their argument that human interference can disturb their natural behaviour and processes. WAZ's argument regarding pups traces back to Groothuis (2017), Bowen et al. (1992), Kovacs (1987) and several other studies, which show that mother seals can temporarily leave their pups to hunt for food to maintain milk production. This implies that the presence of "abandoned" seal pups on beaches does not always indicate a loss of maternal care and that relocation of such pups would break mother-pup bonds, causing substantial stress to both mothers and pups. Therefore, WAZ concludes that the absence of a mother alone is an unjustified reason for humans to capture suckling pups and take them to another beach or SRC.

Concerning weaned seals, WAZ draws on studies of Lander et al. (2002), Noren et al. (2005) and various others to emphasise weaned seals must learn how to feed on their own. Consequently, it is normal for weaned seals to lose weight and be alone on the beach. This implies that the absence of a mother and weight loss alone are considered insufficient reasons by WAZ for admittance to an SRC.

Theme 3: Minimising Unnecessary and Unbearable Suffering

The rationales for Theme 1 and 2 target stranded seals with high survival chances. Conversely, there may also be instances where the displayed survival chances are low. Citing animal welfare studies like Dawkins (2008) and Duncan (2006), WAZ reasons that in such cases, seals could be euthanised to minimise further suffering. This guideline or theme is also part of the SRF. Moreover, it specifies that euthanasia can occur either on the beach (the preferred location) or at an SRC (the alternative considered best).

Theme 4: Seal Conservation

Lastly, Themes 1-3 are bound by the theme of seal conservation. This theme is built on WAZ's analysis of Brasseur's 2018 study on the number of seals living in Dutch waters and brought to Dutch SRCs and the IUCN Red List of Threatened Species. Brasseur's study reveals that the Netherlands hosts over 1,000 individuals per seal species. Comparing this number with the categories of the IUCN Red List of Threatened Species, this means that they can be considered abundant and fall under the category of "least concern species" (Bowen, 2016; Lowry, 2016).

³ To gain more insights into the survival prospects of seals with lungworm, the SRA invites independent research institutions to investigate the issue in collaboration with SRCs

Stepping back in time, however, WAZ's analysis of Brasseur's 2018 study shows an increase in seals taken into rehabilitation when there were over 1,000 individuals per species and the SRA's predecessor was in place. The sharpest rise was in 2009-2011, peaking at 50% of grey seal pups in 2011.

In 2015, in response to the contrast between the seal populations' status and the number of seals taken into rehabilitation, the State Secretary of Economic Affairs tasked the chairman of the Supervisory Board for the Wadden (RCW) to develop a unified strategy for each party that is involved in seal rehabilitation (Van der Zande et al., 2018). RCW's chairman came to the conclusion that there was inadequate consensus among SRCs regarding seal rehabilitation procedures. There were disagreements over how the welfare of individual seals and the protection of the populations in the sea could be balanced.

The lack of consensus fuelled varying interpretations of the SRA's predecessor (Van der Zande et al., 2018). RCW's chairman noticed this and suggested creating a scientific committee to gain evidence-based advice on how to balance individual and population welfare.

In 2017, answering this suggestion, the State Secretary of Economic Affairs established WAZ (Van der Zande et al., 2018). WAZ succeeded in giving the asked advice. Considering WAZ's advice as well as the existing disagreements and its predecessor, the SRA translates the "least concern" status of Dutch seal populations into the stance on seal conservation that the populations are faring well and, with few exceptions, do not require human help.

The specifics of when human help is mainly (not) heartened by the SRA regards Themes 1-3 stances. Further completing the circle, the SRA's core themes are not only linked to WAZ's advice but also to (inter)national legal instruments. These instruments include the Convention on the Conservation of European Wildlife and their Habitat, Habitats Directive, Dutch Nature Conservation Act, Dutch Animals Act, Convention on the Conservation of Migratory Species of Wild Animals, Agreement on Conservation of Seals in the Wadden Sea and IUCN Red List of Threatened Species and will be introduced next using bullet points.

Convention on the Conservation of European Wildlife and their Habitat (CWH) (1979)

- Annex III lists harbour and grey seals as protected species. This signifies that signatory member states of the Council of Europe, including the Netherlands, should cooperate and take legislative measures to protect the species and their habitats from harm caused by human activities

Habitats Directive (1992)

- Implements the obligations put forward in the CWH
- Annex II lists harbour and grey seals as fauna species that substantially enhance biodiversity in the place they live (i.e. habitat) and whose long-term survival demands establishing a Europe-wide network of geographically delineated sites
 - These "geographically delineated sites" are also called Natura 2000 areas. Since both De Kwade Hoek and Delta Region are such sites (Natura 2000, n.d.-a, n.d.-b), this study assumes they are legally most fit for aiding seal rehabilitation
- Annex V lists harbour and grey seals as fauna species for which the signatory countries must ensure that rules about capturing and killing maintain their long-term survival

Dutch Nature Conservation Act (Dutch: Wet Natuurbescherming or Wnb) (2017)

- Mandates letting animals listed in the Habitats Directive, thus grey and harbour seals, live in their habitat as undisturbed as possible from human intervention. This means that it is forbidden to deliberately:
 - Kill and capture seals
 - Damage seals' permanent breeding sites and resting areas
- Makes exceptions for
 - Capturing ill and wounded seals, provided they are brought to a Seal Rehabilitation Centre within 12 hours
 - Killing seals that suffer unnecessarily or unbearably

Dutch Animals Act (Dutch: Wet Dieren or WD) (2011)

- Mandates providing aid to distressed (non)captive animals. This implies:
 - It is forbidden to withhold care from ill, trapped and injured seals
 - It is in the interest of both animal and public health to take seals carrying a zoonosis to a Seal Rehabilitation Centre for treatment
- In their report, WAZ acknowledges the WD might clash with the Wnb since it contradicts the hands-off principle mandated by the Wnb (Van der Zande et al., 2018). The SRA attempts to solve this clash by insisting the legal instruments must be used as guidelines for seal rehabilitation

Convention on the Conservation of Migratory Species of Wild Animals (CMS) (1979)

- Annex II lists harbour seals as migratory fauna species that are expected to benefit significantly from international agreements about their management and conservation

Agreement on the Conservation of Seals in the Wadden Sea (1990)

- Signed by the Netherlands, Denmark and Germany
- Implements the obligation put forward in the CMS. Put differently, it demands the creation of a Seal Management Plan and adjusting it as scientific knowledge evolves
 - Key scientific discovery: at the 1994 Trilateral Government Conference on the Protection of the Wadden Sea it was established that, from a wildlife management and biological perspective, it is no longer essential to bring stranded seals to a Seal Rehabilitation Centre for treatment. This applies to both harbour and grey seals
 - Resulting key amendments: (1) inclusion of grey seals to the Seal Management Plan, (2) limiting the number of seals taken to a Seal Rehabilitation Centre to the lowest level possible, (3) only admitting seals with high survival chances to a Seal Rehabilitation Centre, (4) limiting the number of people authorised to handle seals to the lowest level possible, (5) releasing seals at the place where they were found and as soon as possible (i.e. at the latest half a year after they entered a Seal Rehabilitation Centre, (6) not transporting seals from one country to another, and (7) increasing public awareness about the conservation status of seals as well as seal management measure

Interview Findings: Interviewees' Perceptions of the SRA's Core Themes

This section shifts attention to interviewees' preferences or things they consider important regarding the SRA's core themes. Special focus is put on things complementing the tables' data.

Theme 1: Stranded Seal's Needs

Table 6 reveals the things interviewees considered important concerning stranded seals' needs. This is the SRA's first core theme.

Table 6. Overview of things interviewees considered key regarding stranded seals' needs

Situation described in the SRF	Things considered important [ref code]
Trapped and injured animals	<ul style="list-style-type: none"> - Helping when due to human action [I3, I4, I6, I10, I11, T] - Helping because they suffer/are in distress [I1, I2, I8, I7] - Letting them die [I9]
Suckling pups with no mother in the vicinity	<ul style="list-style-type: none"> - Observing for 24 hours [I5, I10] and weighing to see if it gained weighed [I8, I10] - Observing for 12 hours or directly to SRC [I1, I2] - Informing the public about how to handle seals [I4] - Rest: humans and dogs keep distance from pup [I10, I11] - Staying on same beach so mum can find it [I4, I5, I9, I10] - Letting natural processes take their course [I6, I7, I9]
Weaned seals	<ul style="list-style-type: none"> - Rehabilitating in SRC when in bad condition [I1, I2] - Marking and observing the seals [I10, I5] - Helping when due to human action and suffering [I6] - Rest: in an area prohibiting access to people and dogs [I7, I10], and acting when still there the next day [I7] - Letting natural processes take their course [I4, I5, I8, I9]
Mildly ill animals	<ul style="list-style-type: none"> - Estimating whether a seal on the beach is mildly ill or seriously ill is difficult [I1, I2, I10, T] - Observing for 12 hours [I1, I2] - Leaving on the beach or moving to a quiet spot [I10, I1] - Not moving from another beach to De Kwade Hoek to prevent the seals there become sick too [I4, I5] - Helping when due to human action [I3, I6] - Helping when suffering unbearably [I8] - Helping seals with unknown symptoms in SRC [I11] - Letting natural processes take their course [I3, I7, I10]
Seriously ill animals	<ul style="list-style-type: none"> - Admitting directly to an SRC [I1, I2, I8] - Observing for 48 hours at the SRC and euthanising when it becomes clear that the seal will not make it [I10] - Helping when due to human action [I3, I6] - Helping seals with unknown symptoms in SRC [I11] - Letting natural processes take their course [I3-I5, I7, I9] and not moving the seals to another beach [I4, I5]

As can be seen in Table 6, the things interviewees considered important concerning stranded seals' needs ranged from human help in recovery from illnesses or injuries, admittance to SRCs, observation and undisturbed rest to doing nothing. Moreover, note that Table 6 assumes I3 and I5 did not have an answer for every situation. Table 6 also assumes that Ad (hereafter referred to interchangeably as Ad and A) said his "opinion does not deviate from the SRF" and Tineke said she does not have a clear picture of existing perceptions since the SRA's signatories

tell her things the SRF states. Below follows a description of answers that did not fit in [Table 6](#) (p. 40) but should be considered while reading it.

First, [Table 6](#) should be read while keeping in mind that the situation where seals are trapped and injured elicited I4 and I5's responses that they never saw them at De Kwade Hoek and "we are brought up wrong in The Netherlands" (I4). Our wrong upbringing, they added, is fed by the media. "If 100 seals strand and one happens to be caught in a net, which one is photographed? That one" I4 said more specifically. Besides, "fishers used to be [widely] blamed for deaths of harbour porpoise" (I5) with a bite mark, while as I5 said little attention was paid to the scientific finding these marks are caused by grey seals.

As to suckling pups without a mother nearby, answers that did not fit in [Table 6](#) include that "you don't have them here" (I1 & I2) in the southwest of the Netherlands. I1, I2, and I11 instead named Groningen's Dollard Estuary as a well-known place where pups are born and raised. Another topic I10 addressed and that is missing from [Table 6](#) is the umbilical cord. According to I10, seals with a cord are less than a week old. Regardless, if the seal has no cord, it is harder to estimate if they are suckling pups or weaned. The difficulty of telling whether a pup is nursed (or not) is also the reason why I1 and I2 think the observation period for suckling pups should be 12 instead of 24 hours. Besides, as I2 further specified in support of the need for a 12-hour rule, "if there are a few storms, they will lose their mum. Then they are orphans".

Concerning weaned seals, [Table 6](#) should be supplemented with I8's remark that "we used to call them howlers, but I think it is a somewhat coloured term because it has a sad and pathetic connotation. But howling is just the sound seals make . . . so not every howling seal cries for help". Additionally, I10's comment should be considered that weighing weaned seals in the observation period does not provide helpful insights as it is normal for them to lose weight. "He must understand 'I am losing weight, so I am hungry, so I am going in the water to catch a fish'" (I10). However, if weaned seals have an injury like a damaged eye, I1 and I2 emphasised that they must be categorised as injured and receive treatment in an SRC.

Then there is the unclear distinction between mildly and seriously ill seals. To elaborate on the findings [Table 6](#) presents, I1 and I2 argued that both mildly and seriously ill seals usually stay on the beach. This is unlike healthy seals that "disappear when you approach them" (I2) or very seriously ill seals that "stay put the most" (I1 & I2). Building on I1 and I2's observations, I10 highlighted that a seal "is often relatively stressed, especially when you are going to try to catch it. Especially with bystanders. So due to the adrenaline such seals produce, almost all seriously ill [seals] look mildly ill". Moreover, I1 and I2 again used the difficulty identifying the situation to advocate a 12-hour observation period and I10 to insist on leaving seals on the beach for as long as possible.

Finally, it should be added to [Table 6](#) that I8 and I11 provided more details on reasons to admit (seriously) ill seals to an SRC. In the eyes of I8, the prime reason seriously ill seals need treatment in an SRC was that you see they suffer from something (e.g. a large wound) that "really causes a problem . . . [and] does not stop with a few days of rest". I11, on the other hand, drew attention to unknown symptoms of diseases, including zoonoses. As I11 elucidated: "ill animals with symptoms of a disease you cannot pinpoint on the spot are animals that might even pose a threat to public health . . . but above all, they could be indicators that something bad is happening in the population. In such situations, we say you should at least try to find out what they suffer from". This, along with a mention of research on lungworm in the SRA, also made I11 say about 96/100 ill seals their SRC treats have lungworm and 4/100 other diseases.

Themes 2-4: Human Help, Minimising Suffering and Seal Conservation

In Table 7 is shown which things the interviewees considered important regarding the second, third and fourth themes of the SRA. Respectively, these themes are humans helping seals, minimising unnecessary and unbearable suffering and seal conservation.

Table 7. Overview of things interviewees considered key regarding the SRA's other core themes

Key theme in the SRA	Things considered important [ref code]
Seals receiving help from humans	<ul style="list-style-type: none"> - Do not leave seals on the beach to die. Either treat them at the SRC or euthanise them [I1, I2] - Only helping seals if they pose a risk to animal and human health, or if they are wounded [I4] - Not every seal lying on the beach needs help. Some just want to rest [I3, I6, I8, A] - People need to learn SRCs have the final responsibility for seal rehabilitation [I11, T], seals are predators [I4, I5, I7, I11], and what they can(not) do with seals [I4] - You must help seals that are suffering unbearably [I8, A] - Keeping an eye on young seals and letting nature take its course for sick seals [I5]/letting nature take its course [I9] - Only helping seals if they got sick/injured due to human action is the essence [I3, I6, I8, I10, I11, A, T]. But this is hard to estimate [I3, I10, I11] as their history is unknown [I10]
Minimising unnecessary and unbearable suffering	<ul style="list-style-type: none"> - Euthanising the seal [I1-I3, I8, I10, I11, A, T] - Letting a veterinarian examine the seal ASAP [I10, I11] - Treating the seal at the SRC if the veterinarian estimates it will save the seal's life [I1, I4, I11, A] - Intervening when the seal poses a threat to human health [A] - Letting nature take its course [I3, I5-I7, I9, I11, T]: there are plenty of healthy seals at De Kwade Hoek [I3, I5], people need to learn/accept that life and death are part of nature [I3, I6, I7, I11, T], and the starting point is to avoid seals getting in trouble due to human action and offering seals a life with as many natural processes as possible [I11] - It is the (ethical) question of what suffering entails [I4, I7, I11, T], if seals are suffering [I11], and if humans should intervene with "suffering" seals [I4, I7]
Seal conservation	<ul style="list-style-type: none"> - The population at De Kwade Hoek [I3-I5, I7, I9]/in the Netherlands [I6, I8, I10, I11, A, T] has recovered and is large. So, with few exceptions, protection is unneeded [I3-I11, A, T] - First, a solid record of seal numbers is important [I1, I2]

Table 7 illustrates the things interviewees considered important regarding humans helping seals, minimising unnecessary and unbearable suffering and seal conservation lay between two extremes. More precisely, I1 and I2 leaned towards not leaving seals on the beach to die in any situation, whereas the others gravitated more towards letting nature take its course. The following paragraphs will further delve into things that might not speak directly from Table 7 yet should be kept in mind while reading it.

To begin with the theme of humans helping seals, [Table 7](#) (p. 42) should be complemented with the finding that I3 said seal strandings do not happen at De Kwade Hoek daily. It should also be added to [Table 7](#) that the theme of humans helping seals prompted I11 to say that “our starting point is that seals are indicators of the sea: to some degree, what happens to seals is actually a kind of reflection of how we [humans] treat the sea . . . [We] often cause problems that seals cannot handle within their natural dynamics . . . [e.g.] when they are trapped in our trash . . . We think you should take responsibility for that”. Besides, [Table 7](#) keeps hidden that not only I11 but also I4, I5, I7 and Tineke brought natural dynamics forward as the argument to state that seals’ cute looks often make us forget that they are predators and that we must thus stay away from them. Similarly, [Table 7](#) does not explicitly say that “humans should take responsibility for the consequences of their actions” was used as an argument by I11 as well as I3, I4, I6, I8, I10, Ad and Tineke to underline the importance of helping seals that get sick or injured due to our actions and remark it is hard to estimate if injuries and sicknesses are human-induced.

In the matter of the theme of minimising unbearable and unnecessary suffering, bear in mind while reading [Table 7](#) that the interviewees who had stressed that humans should not help seals (i.e. I5 and I9) referred to letting nature take its course. On the other hand, the interviewees who had expressed that humans should help seals that suffer (i.e. I1, I2, I8 and Ad) suggested euthanising them. I8 motivated that euthanising seals can be a solution “to end their suffering” when the prognosis is that they will not recover and Ad “when they are not going to make it”. Moreover, I1 and I2 advocated euthanising seals with a genetic disorder to keep them from passing it on to the next generation and thus from weakening the population’s gene pool. I1 and I2 also acknowledged you usually cannot see a genetic disorder from the outside and must look for clues from the inside, such as a hole in the palate. The other interviewees’ preferences pivoted on both euthanasia and letting nature take its course. In cases where it is clear a seal will not recover, also not after treatment in an SRC, they generally supported euthanasia. However, the interviewees also showed they care about letting nature take its course by saying that people need to learn death is part of nature too, and the starting points should be to offer seals a life with as many natural processes as feasible and avoid that seals get in trouble due to human actions. I4, I7 and I11 further hinted ethical questions are at the roots of these dual preferences. Examples of questions they urged addressing more thoroughly include “what is suffering?” (I7) and “how do you decide if a seal is better off in its natural environment or will benefit from a 2 to 3-month trajectory in an SRC?” (I11).

Regarding the theme of seal conservation, the findings [Table 7](#) presents should be complemented with more perceptions of the interviewees about seal numbers. I1 and I2 namely pointed out that they think conclusions cannot be drawn yet on seal abundance since it is crucial to first establish a clear picture of where seals strand and how many. To further support their answer, they used the same argument as in their stories on the 12-hour rule, which is that field knowledge is currently undermined. All the other interviewees, as [Table 7](#) shows, contended that the population at De Kwade Hoek/in the Netherlands has recovered and is large and thus does not need protection except in the earlier-mentioned situations. [Table 7](#) however does not show that I4 and I5 clarified that “[on the sandbanks off De Kwade Hoek’s coast] you can see many seals with the naked eye during low tide . . . seal numbers keep increasing because the sandbanks keep growing”. [Table 7](#) also keeps hidden that I4, I5 and I8 linked their perceptions that the seal population at De Kwade Hoek is large with concerns about the safety of beachgoers. “If there is not enough food because there are too many seals, what will they eat? If they can bite a harbour porpoise in the belly, then why

wouldn't they attack swimming people?" (I4, I5). Or, as I8 phrased her concern, we should ensure the safety of humans and seals "if [their] uses of a habitat conflict".

Then there are some points regarding Tineke's understanding of existing perceptions that did not fit in Table 7 (p. 42) but should be kept in mind while reading it. In relation to the theme of humans helping seals, one of these points is that Tineke said this is "where the differences lie [since] where there are people there are differences". The exact differences remained unspecified. Nonetheless, Tineke confirmed the perception of I11 on the public's lack of knowledge of SRC's responsibilities and mentioned that "it is not reluctance. People like to do the right thing, but sometimes do exactly the wrong thing".

Concerning the theme of minimising suffering, Table 7 shows that Tineke confirmed the existence of the perceptions that seals that suffer unbearably and unnecessarily should be euthanised, that people need to learn death is part of nature and that the definition of suffering is ambiguous. However, what Table 7 does not show is that Tineke emphasised that the perceptions of the SRA's signatories are versatile. Specifically, Tineke said "that is always the big trap of every subject we talk about . . . You think the other sees it just as I see it. They use the same words while they live in completely different worlds".

The last implication of Table 7 that should be kept in mind while reading it concerns the theme of seal conservation. For this theme, Tineke confirmed the existing perception that seal populations are faring well. However, Tineke also said she is aware of the perception about the registration of stranded seals but does not have a clear picture of what this means in practice.

4.2.2 Output Legitimacy

Policy Design Review Findings: Encoded Ideal Goals and Strategies

Ideal Goal

The SRA's ideal goal, as outlined in Section 1.3 (p. 4), is to implement uniform seal rehabilitation procedures. Allowing stranded seals to remain on the beach where they are found is seen as the procedure that should be leading when working towards this goal.

Most Efficient/Specific Strategy

When the SRA's predecessor was in place, the rehabilitation procedures were formulated such that stranded seals, especially suckling pups and ill seals, could easily find their way to SRCs. However, this changed after WAZ gave their advice on how to balance individual and population welfare.

In their report, WAZ specifically says that seals that end up in an SRC should stay there as briefly as possible and preferably only be admitted when getting in trouble due to human actions. Supporting their advice are animal welfare studies like Korte et al. (2007) and McEwen and Wingfield (2003), which define animal welfare as an animal's (acquired) ability to adapt to their living environment for long-term survival. This definition implies that seals' welfare depends on their ability to independently cope with encountered challenges. Accordingly, WAZ reasons that stranded seals fare best on beaches and should thus preferably be allowed to recover there and – if the challenge is linked to normal biological processes – without human help.

The SRA follows WAZ's approach to seal welfare, meaning it says the default seal rehabilitation location should shift from SRCs to beaches, preferably those where the seals are found. In cases where the stranded seal receives treatment in an SRC, the seal welfare definition of WAZ

is interpreted as ensuring they are released back onto the beach once they are medication-free, are tagged and/or chipped, exhibit regained vigour and have high survival chances.

Moreover, the rehabilitation location shift in the SRA is built around one guideline WAZ proposes: seals may receive treatment in SRCs provided it leads to a 5% population increase per year per species at most. This 5% benchmark, borrowed from the SRA’s predecessor, applies to populations surpassing 1,000 individuals. Such numbers indicate a population that is faring well, which, as per Theme 4 of the SRA (see p. 37), aligns with the current situation.

Delving deeper into seal numbers, WAZ references the findings from Brasseur (2018) and Brasseur et al. (2015) that there is a continuous back-and-forth swimming of young seals between the Netherlands, Belgium, the United Kingdom, Germany, Denmark and France. As such, WAZ emphasises that migration should be considered when studying population welfare. What the inclusion of a link with migration exactly implies for seal rehabilitation procedures, however, is left undefined in WAZ’s report. The SRA’s stance that the default rehabilitation location should shift from SRCs to beaches consequently omits migration.

Lastly, in line with the shift in the rehabilitation location, the SRA states the following means should be employed: training, collaboration, communication, research and enforcement. Specifically, “training” refers to seal guardian training; “collaboration” to SRCs and MMROs working together on seal rehabilitation; “communication” to the communication plan (see p. 29); “research” to the survival chances of seals treated in SRCs; and “enforcement” to handling bystanders who break the rules encoded in the SRA (see p. 38).

Interview Findings: Interviewees’ Ideal Goals and Strategies

Specific Strategy: Rehabilitation Location

Table 8 makes clear, as Tineke hoped, that of the locations the SRA mentions, most interviewees considered the seals’ natural environment to be ideal for rehabilitation. In the words of I11, “seals are best off in the sea itself. When possible, we should leave them there”. This was also used as an argument by I3, I7 and I9 to state that SRCs must mainly play educating roles and bring people closer to nature, something which “most people lost” (I9). When seals are seriously ill, however, I1, I2 and I8 saw SRCs as ideal rehabilitation locations. As I1 motivated: “you cannot help them otherwise”. I1 and I2 brought to light too that the data of seals they registered typically show a downward migration from Denmark to Germany, England, the Netherlands, Belgium and France after birth peaks and that every country surrounding Dutch waters has no own SRA. Thus, they concluded, if the situations in which seals are rehabilitated in a Dutch SRC need to be restricted, seal rehabilitation must be regulated on a European level.

Table 8. Overview of interviewees’ perceptions of the ideal location for seal rehabilitation

Locations mentioned in the SRA	Location considered ideal [ref code]
Rehabilitation on the beach or in an SRC	- SRC for seriously ill seals [I1, I2, I8] - SRCs must mainly educate people about seals [I3, I7, I9] - Natural environment [I3-I11, A, T]

General Goals and Strategies

The interviewees were also asked to share what goals and strategies they perceive are best for seal rehabilitation and conservation in general. Table 9 (p. 46) summarises these perceptions.

Table 9. Overview of rehabilitation/conservation goals and strategies interviewees saw as best

Goal perceived most ideal	Strategy perceived most efficient to achieve goal	Ref code
Not leaving seals on the beach to die	Research: registering stranded seal numbers	I1, I2
	Education: telling beachgoers about seals using means like information carts and signs, brochures and social media	I3
	Zoning: beachgoers use binoculars to view seals from a distance	
	Education: (a) using seals as key players to show SRC visitors the influence we humans exert on the seals' living environment, (b) adding beach entrance signs about seals, and (c) teaching people that SRCs have the final responsibility for seal rehabilitation	I10 I10, T I11
People know that seals are part of nature and how to handle them when encountering one	Education: teaching beachgoers how (not) to handle seals and that seals are predators	I4
	Zoning: (a) making clear beach driving rules, especially for the bird nesting season, (b) putting fences around areas where young seals rest, and (c) only allowing people to walk at De Kwade Hoek	
Humans only help seals that pose a threat to animal and human health, and seals that are wounded	Procedure: (a) not helping seals that are sick, and (b) following the basic principle that seals should not be moved to other beaches and rest on a quiet beach	I5 I9
	Education: teaching people that seals are predators	I5
	Enforcement: to ensure that both people and dogs keep their distance from seals	I9
	Zoning: making clear beach driving rules	
Letting nature take its course	Procedure: observing seals on the beach for as long as possible	I6, T, I11
That seals rest in their natural environment as much as possible	Procedure: giving back to nature by disturbing it less and being more conscious about our recreation and consumption activities as well as animal welfare	I7
	Education: teaching people that seals are predators	
Letting nature take its course as much as possible, also when seals are sick or injured	Procedure/research: treating seals brought to the SRC, doing research, recording treatments as well as possible and chipping seals	I8
Doing your job the best as possible, and learning from the seals when they are at the SRC	Zoning: creating resting areas at De Kwade Hoek for seals that need observation	A
Accepting populations fluctuate and thinking carefully why it happens		

As [Table 9](#) on the previous page shows, the spectrum of seal rehabilitation and conservation goals interviewees saw as ideal stretches from (public) acceptance that seals are part of nature and that their populations fluctuate to doing your job the best possible and helping seals that are in distress, wounded and threaten animal and human health. Strategies aligned with these goals encompass research, education, zoning, enforcement and rehabilitation procedures.

Shifting attention to things [Table 9](#) does not show and should be added, I9 and Ad observed that De Kwade Hoek is a quiet beach (i.e. has low visitor numbers) and seals regularly rest at its northern tip. In addition, I7 cited TGB as an example of a fitting way to realise their proposed strategies in practice and underlined that being conscious also means “that you must not want to save an animal at all costs”. A final addition to [Table 9](#) worth uncovering is I9’s comment that beachgoers generally stay away from seals at De Kwade Hoek, but that off-leash dogs are a big problem and form an unnecessary stressor for seals. I9’s comment especially stands out because it was also noted by all other interviewees in other stages of the interviews.

As for Tineke, she stressed it is hard for her to find out existing perceptions since the SRA’s signatories usually tell her things the SRA states. Regardless, she affirmed the importance of beach access that I3 brought up and that the SRA’s ideal strategy and goal match those of I6 and I11 about observing and letting seals rest in their natural environment. Moreover, Tineke said she wants to organise meetings to get all stakeholders involved in the SRA on the same page and offer opportunities to learn from each other about seal rehabilitation.

Amendments to the SRA

On a final note, several interviewees proposed making amendments to the SRA. These amendments are presented in [Table 10](#).

Table 10. Overview of amendments interviewees proposed making to the SRA

Proposed new strategy	Old strategy	Ref code
12-hour observation period	24-hour observation period	I1, I2
Seal guardians may act alone when quick decisions need making to guarantee the seals’ and/or bystanders’ safety	Seal guardians must contact a veterinarian or animal caretaker of an SRC before handling stranded seals	I1, I2
Creating more clinical indicators for admission of seals to an SRC	Bringing a seal into an SRC when it is clear the seal will be disturbed by people or dogs. In theory, this means every seal can be taken in, also mildly ill ones	I10
Further defining when seals are mildly or seriously ill based on clinical indicators. This also includes the role of adrenaline	Direct admittance of seriously ill seals to an SRC	I10, T
Looking more at the situation in SRCs: what they can offer seals and when they can take in seals, especially when it is unclear if they are mildly or seriously ill	Looking at the situation of the seal (i.e. the situations mentioned in the SRF)	I10
Explaining what happens in practice when seals are admitted to an SRC or left in their natural environment	Theoretical explanations of situations when seals are admitted to an SRC or left in their natural environment	T

The findings set out in [Table 10](#) (p. 47) tell that the amendments interviewees proposed cover shortening the length of the observation period, allowing seal guardians to act more on their own when quick decisions need to be made because the seal's and/or bystanders' safety is at stake, adding more clinical indicators to situations where seals are admitted to an SRC, looking more at the situation in SRCs, and elaborating on the practical implications of the SRA.

Delving beyond the answers that [Table 10](#) reveals, I1 and I2 said that letting seal guardians take more initiative entails they can better protect beachgoers from the seal's sharp claws and teeth and taking the seals to a beach where they can get more rest (i.e. are disturbed less by beachgoers). On the contrary, I8 clarified that it is difficult for A Seal to give advice 24 hours a day due to limited staff. This means seal guardians sometimes must wait a while for instructions and that calming people down is part of their job. I8 as well acknowledged it can be difficult for seal guardians to calm people down who scream things like "you have to do something now, take the seal with you", and roleplays are part of their current training. Finally, I10's perception of the old strategy about disturbance should be backed with an insight from Ad. During another part of the interview, Ad namely said – which did not fit in the tables – that this strategy offers an "escape" for admitting any seal to an SRC.

4.3 Social Legitimacy Underlying Green Beach Policy

This section shifts focus to Green Beach policy, following the same structure used for the one on the SRA. Accordingly, Section 4.3.1 will detail the PD and interviewees' perceptions concerning input legitimacy and Section 4.3.2 their perceptions regarding output legitimacy.

4.3.1 Input Legitimacy

Policy Design Review Findings: Encoded Core Themes

Green Beach policy contains the following criteria for birds (Schut et al., 2021):

1. Agreements on recreational zoning are used to provide wintering birds with sufficient space and rest to find food
2. When suitable for beach-nesting birds, measures are taken to create a nesting beach

Borrowing these criteria, two core themes emerge in the context of human-seal coexistence: beachgoers' needs and the simultaneous use of the same beach by seals and humans. The rest of this section further describes how these themes are interpreted in Green Beach policy.

Theme 1: Beachgoers' Needs

In Green Beach policy, the criterion referencing recreational zoning builds on the criterion concerning nature education. This criterion says that a Green Beach must have a clear informative role and that educational activities must be actively organised (Schut et al., 2021). Furthermore, it is based on the intention to involve beachgoers in the lives of seals inhabiting a Green Beach. Accordingly, nature education can be seen as the interpretation of beachgoers' needs in Green Beach policy and involvement in seals' lives as the rationale behind it.

Theme 2: Simultaneous Beach Use by Seals and Humans

The criteria for birds in Green Beach policy convey that beachgoers should give beach animals, and thus seals, room to rest, breed and feed. While the meaning of the theme of simultaneous beach use by seals and humans is self-explanatory, it thus seems grounded in the idea that this is possible when humans do not disturb seals.

Interview Findings: Interviewees' Perceptions of Green Beach Policy's Core Themes

Theme 1: Beachgoers' Needs

Table 11 illustrates the things interviewees considered important concerning beachgoers' needs. This is the first core theme of Green Beach policy.

Table 11. Overview of things interviewees considered important regarding Green Beach policy's key themes

Green Beach policy's key theme	Things considered important [ref code]
Needs of beachgoers	<ul style="list-style-type: none"> - Resting in nature [I1, I2, I7]/by the sea with the feeling of being in nature [I11] - Nature to visit [I3, I4, I9]/wandering on the beach without being restricted to going somewhere [I1] - Being informed what Green Beaches are [I4, I9] - Knowledge about ebb and flow [I4, I5] - Safety of humans and seals [I8] - Being good to nature [I5]
Simultaneous use of Green Beaches by humans and stranded seals	<ul style="list-style-type: none"> - People need to learn that seals also use a beach [I1, I2, I5, I9], and how to (recognise) report(ed) seals [I5] - Can go well when people, dogs and vehicles keep their distance from seals [I1-I7, I10, T], but will be difficult to achieve in practice [I3] - Can happen if there are areas on the beach where beachgoers are not allowed to come [I1, I2, I8-I10] - Can go well when fostering natural processes [I11]

As Table 11 highlights, the interviewees (except I10 and T who did not have an answer) attached importance to resting in nature, access to nature, being good to nature, safety, and knowledge of Green Beaches and ebb and flow in terms of beachgoers' needs. What cannot be seen in Table 11, however, are the more in-depth answers of Natuurmonumenten, the municipality of Goeree-Overflakkee and TGB's project manager about these needs.

To elaborate, according to Natuurmonumenten and the municipality, the location and design of De Kwade Hoek create a feeling of rest and being in nature. Locational aspects they principally referred to were that it takes 15 minutes to walk from the parking lot to the beach as well as the absence of a beach pavilion and nearby highway entrance. As to its design, Natuurmonumenten pointed to the dominance of unpaved paths and the impossibility (the landscape's characteristics offer) of building a parking lot closer to the beach as factors adding to the feeling of being and resting in nature.

TGB's project manager delved deeper into the educational needs of beachgoers and clarified that Green Beach policy predominantly aims to involve more people in Green Beaches. This implies that, regarding the type of beachgoer, Green Beach policy targets everyone interested in learning more about life on Green Beaches, thus TGB's project manager.

Theme 2: Simultaneous Beach Use by Seals and Humans

Additionally, the interviewees shared their perceptions of things they considered important regarding the concurrent use of Green Beaches by seals and humans. These things also relate to the second core theme of Green Beach policy and are summarised in Table 11 above.

As [Table 11](#) (p. 49) shows, the things that the interviewees considered important regarding the concurrent use of Green Beaches by seals and humans encompassed public knowledge that seals use beaches too, keeping a distance and fostering natural processes. The remainder of this section will detail the answers on knowledge and distance [Table 11](#) hides. Note that the natural process answer was deemed self-explanatory.

Concerning knowledge, I1 and I2 further explained that nature in the Netherlands is man-made and that most people are no longer familiar with natural processes. Therefore, they reasoned, people will understand they should not panic and that not every seal needs help if they know the different situations in which seals can be found on a beach.

Apropos of distance, I8 clarified that seals are interested in movement. “Maybe there is something to eat’, they think. Because that is what they mainly look for” (I8). Another reason I8 mentioned distance is important is that “seals feeling unwell are less likely to flee, but that does not mean they like having people around. So, they still stress from the fact someone approaches them”. Or, as I10 put it, if stranded seals flee in the water, “the chance they survive becomes smaller”. This specific reason was given too by I10 to say dogs should stay away from seals and that free-roaming dogs and dog bite incidents are currently a big problem.

Lastly, Tineke confirmed distance is key to simultaneous beach use. In support of her argument, she referred to the yellow sign on the SRA’s website (see [Figure 3](#), p. 5).

4.3.2 Output Legitimacy

Policy Design Review Findings: Encoded Ideal Goals and Strategies

Ideal Goal

As mentioned in Section 1.2 (p. 3), the dual goal of Green Beach policy involves conserving animals and plants living on Dutch sandy beaches and enhancing human experiences of that life. The rationale behind this dual goal can be found in Section 1.2.

Most Efficient Strategies

To achieve its goal, in the context of human-seal coexistence, the criteria encoded in Green Beach policy hint at utilising the following strategies (Het Groene Strand, n.d.-b):

- Education
- Signage
- Collaboration
- Zoning/making agreements on human and seal beach use

The rationale behind education and signage can be found in Sections 1.4 (p. 5) and 4.3.1 (p. 48), the rationale behind collaboration in Section 1.4 (p. 6) and the rationale behind zoning in Section 1.1. (p. 1). Furthermore, it should be added that specifically for agreements on beach driving, the criteria encoded in Green Beach policy tell that seal guardians’ cars should follow a fixed path. The reason behind this is to ensure a beach’s biodiversity, especially dune vegetation and birds, is protected as much as possible (Het Groene Strand, n.d.-a, n.d.-b).

Interview Findings: Interviewee’s Ideal Goals and Strategies

Goals and Strategies Regarding Enhancement of Human-Seal Interactions

[Table 12](#) on the following page depicts the goals that the interviewees considered ideal regarding human-seal interactions. A more in-depth version of this table can also be found in [Appendix I](#) (p.128).

Table 12. Overview of human-seal interaction goals and strategies interviewees saw as best

Goal perceived most ideal	Strategy perceived most efficient to achieve goal	Ref code
<p>Beachgoers keep their dogs on a lead and 30m (or what I9 calls “binocular distance”) from seals because they understand the needs of seals. When this is the case, seals can rest in their natural environment and stay on the beach where they are found, also if it is a crowded beach</p>	<p>Signage: (a) at beach entrances explaining seals can rest on the beach, what grey and harbour seals are, 30m distance must be kept, dogs put on a lead, and how (recognise) report(ed) seals, (b) at the high-water line using the yellow sign from the website about the SRA/on the beach showing what people must do when encountering a seal and featuring a pictogram of a seal and QR-code to the website about the SRA, and (c) writing dogs must be kept on a lead in bigger letters on the signs that are already placed at De Kwade Hoek</p>	<p>I1-16, I10/I1, I2 19</p>
	<p>Enforcement: (a) by Special Investigating Officers (BOAs) and a volunteer surveillance team to make sure beachgoers follow the rules explained on information signs, especially the rule to keep dogs on leads, and (b) on WhatsApp for extra pair of eyes</p>	<p>I3, I9 19</p>
	<p>Education: (a) seal guardians draw on the knowledge from their training to tell beachgoers the stranded seal they are handling stays on the beach, (b) the beach community tells beachgoers stories about life on Green Beaches and what rules they must obey, and (c) training dog owners to keep dogs on a lead when they see wildlife</p>	<p>I11 I4-I6 I10</p>
	<p>Zoning: (a) resting areas for seals (i.e. where beachgoers cannot come) with Green Beaches on its edges and behind that normal beaches, (b) on Green Beaches a rest radius of 30m around a seal or alternatively 10m when there are multiple seals, and (c) keeping the parts of De Kwade Hoek Beach that are already closed to people closed</p>	<p>I11 16</p>
<p>Beachgoers dare to hear the answer no and let seals be</p>	<p>Education: making beachgoers aware that life is not just about recreation and consumption and death of seals is part of life too</p>	<p>17</p>
<p>Safety: seals can transit diseases that make humans and dogs sick</p>	<p>Signage: near the stranded seal telling the animal is in observation and distance must be kept</p> <p>Education: when there are many bystanders, seal guardians explain that distance must be kept or that they take the seals with them for safety reasons</p>	<p>18</p>
<p>Getting rid of human-seal encounters as there is much more to see on the beach: emphasising the bigger picture and natural processes</p>	<p>Education: the beach community tells beachgoers stories on what they can see and do at the beach</p>	<p>A</p>

In [Table 12](#) on the previous page (or the in-depth table in [Appendix I](#), p.128) is shown that interviewees' ideal goals regarding human-seal interactions covered humans and dogs keeping binocular distance from seals, humans daring to hear the answer no, human and animal safety, and emphasis on the bigger picture. Furthermore, [Table 12](#) (p. 51) depicts that signage, enforcement, education and zoning were seen as the most efficient strategies for reaching these goals. Below will be delved into things related to these strategies that did not fit in (the in-depth version of) [Table 12](#).

Beginning with the strategy of signage, I1-I6 and I10 anticipated that most beachgoers can be reached at beach entrances. They thus proposed either placing a sign with detailed information about (encounters with) grey and harbour seals there or adding such information to the existing sign about life on Green Beaches. Another part of the beach where many people walk and I10 mentioned is the high-water line, and another thing I1, I2, I8 and I10 urged was to (re)share the most vital information on seal interactions near the seal. Therefore, I1, I2, I8 and I10 also suggested putting yellow signs from the SRA's website (see [Figure 3](#), p. 5) on the beach. Dunes were thought less suitable. "There they often lay out of sight. So, if you put a sign next to it, people will probably start looking for the seal", I10 clarified. I9, finally, went into more depth on existing signs that explain rules for dogs and suggested their texts would be more readable when written in bigger letters.

Concerning the strategy of enforcement, (the in-depth version of) [Table 12](#) on the previous page should be combined with I3's remark that "when there is a sign that says 30m distance must be kept [from seals] and people deliberately ignore it, I think enforcement is necessary". Natuurmonumenten's Special Investigating Officers (BOAs) and volunteer surveillance team were specifically considered apt candidates for enforcement. The underlying reasons were that BOAs are authorised to punish rulebreakers, the team is trained to admonish rulebreakers, and A Seal stressed they cannot take up the task. Besides, as I9 said, a WhatsApp group with some outsiders (e.g. NLGO's volunteers) could be a helpful way for BOAs and the volunteer enforcers to have extra pairs of eyes check what happens at the beach.

Furthermore, while the strategies related to education and zoning were mainly seen as self-explanatory, I11's note about zoning received more explanation than shown in (the in-depth version of) [Table 12](#). This explanation should be considered while reading (the in-depth version of) [Table 12](#) and was that "seals benefit from areas that are fully closed to humans [since our studies show they can rest better there] . . . [People generally] find it hard if a thing is forbidden. We despise that [in the Netherlands]. On the edges of such restricted areas, you [thus] create Green Beaches, and behind that normal beaches" (I11).

Finally, the findings (the in-depth version of) [Table 12](#) displays should be supplemented with Tineke's insight that she perceived the existing ideal goals to be distance and safety. It should accordingly also be added to (the in-depth version of) [Table 12](#) that Tineke said that signage, education, enforcement and I11's proposition about zoning are efficient ways to reach these goals. Besides, as should be included in (the in-depth version of) [Table 12](#), in her answers, Tineke indicated the power of repetition in educating beachgoers on seals as well as that enforcement should be done in consultation with BOAs and the police.

Green Beach Management

Various interviewees also shared goals and strategies they considered best for Green Beach management. [Table 13](#) on the next page provides an overview of these goals and strategies.

Table 13. Overview of goals and strategies interviewees saw as best for Green Beach management

Goal perceived most ideal	Strategy perceived most efficient to achieve goal	Ref code
Observing stranded seals on a beach like De Kwade Hoek where they can rest without being disturbed by humans	Procedure: (a) treating seals in an SRC if they need medical help because there is the right equipment and medication, and it will reduce unnecessary driving on the beach. A mobile seal rehabilitation unit would not work as the coastline is long, and strandings happen too little. And (b) when a stranded seal is found on a beach near De Kwade Hoek and rest cannot be ensured, then the seal could be moved to and observed at De Kwade Hoek since it is a secluded beach	13 19
Maintaining the right balance between driving on the beach as little as possible and observing seals on the beach/ensuring the seals that are observed can rest	Procedure: (a) cars are following one fixed path as much as possible, (b) observing seals from a distance using binoculars or technical resources like a drone when possible (e.g. moulting pups or if they bleed a little) so cars can drive less far on the beach, (c) parking the car at a certain distance from the seal and walking the last part to prevent they are disturbed by the sound and start moving (though, grey seals pups are known to sleep soundly. They often do not wake up), and (d) when necessary, approaching the seal at least once every 24 hours to check how they are doing	13, 18 18
Fewer vehicles driving on the beach: arrange better that they keep one fixed track (preferably near the high-water line) and for what reasons they can drive on the beach	Zoning: (a) cordoning off the beach so that vehicles must follow one fixed path, which (b) could be done by placing yellow-headed posts at the high-tide line Enforcement: checking if people follow rules Collaboration: organising a meeting with all stakeholders who currently drive on the beach to make rules about beach driving (i.e. discussing what is already happening and what can be improved)	17 19 17 19
Letting nature take its course at more parts of the beach while being realistic it serves economic interests too (i.e. to make money via tourism)	Collaboration: (a) showing that nature and nature experiences can go hand in hand with the help of the beach community (e.g. they help to keep the beach clean), and (b) working together with the municipality of Goeree-Overflakkee	13

As Table 13 tells, the Green Beach management goals that the interviewees saw as best were beach driving, observing seals and nature experiences on the one hand, and allowing seals to rest undisturbed and letting nature take its course on the other hand. Procedures, zoning, enforcement, collaboration and education were perceived as the most efficient strategies to achieve these goals. The rest of this section will look beyond Table 13's contents and elaborate on what drove interviewees to talk about beach driving and its link with undisturbed rest.

To start with the discussions about driving, interviewees spoke of both transporting seals *to* and driving *on* De Kwade Hoek's beach. The comments about transportation were made by I3, I8 and I10, who elucidated car rides are stressful situations for seals. This stress was pointed at by them as the main reason why seals brought to De Kwade Hoek (should) come either from elsewhere on the island Goeree-Overflakkee or from Voorne Beach, a Green Beach opposite De Kwade Hoek (see [Figure 4](#), p. 6). Vice versa, I3 noted that, ideally, seals found at De Kwade Hoek should and can be put for observation at Voorne Beach when circumstances do not allow for them to stay at De Kwade Hoek.

Besides, the comments about driving on De Kwade Hoek's beach highlighted the issue of unnecessary beach driving. As I3 said in relation to, "one criterion for Green Beaches is that driving occurs as little as possible [to keep ecological values intact]. And when driving on the beach – since sometimes it is unavoidable – to do that as much as possible on one track . . . [But] sometimes you just see eight tracks next to each other . . . sometimes I just see there has been a race". Another clear example of unnecessary beach driving was given by I4 and I5. During the part of the interview on the SRF, they said they once saw a family parked a car on the beach. When they asked the family what they were doing, they were told there should be a seal. But, I4 and I5 concluded, "we went searching, and there was no seal to be seen". I7 and I9 focussed more on the parties who have a permit for beach driving. According to their stories in the part of the interview on Green Beach management goals and strategies, there are at least eight, namely: Natuurmonumenten, seal guardians, the municipality of Goeree-Overflakkee, Rijkswaterstaat (the executive agency of the Dutch Ministry of Infrastructure and Water Management), the Waterschap (the water board), the police, customs, and the Reddingsbrigade (the national lifesaving brigade). To better manage beach driving, I9 indicated that Natuurmonumenten could organise a meeting with all beach drivers. However, given that "this has been in the planning for two years" (I9), it was deemed less suitable. I7 also used similar arguments to express scepticism about the efficiency of a meeting. Alternatively, I7 and I9 thus brought forward zoning and enforcement as efficient strategies to reduce unnecessary beach driving. I9 especially suggested creating one fixed path near the high-tide line since "after high-tide, when the water recedes . . . there the beach sand is hard. And then you do not get stuck". Besides, I9 argued tire tracks disappear after the next high tide, which makes the high-tide line appealing from a landscape viewpoint.

As to beach driving and rest's relation, I3 and I8 saw driving on a fixed path, parking cars at a distance and observing seals from a distance as the best strategies to ensure seals can rest undisturbed. Regardless, I8 noted it is not always possible to tell from afar if seals' health changes. A balance between beach driving and undisturbed rest was therefore considered best achievable by I8 if seals may be approached at least once every 24 hours, when needed.

Last but not least, Tineke's understanding of existing perceptions focussed on what the SRA mentions and her own. In relation to the SRA, she emphasised that observing seals and thus beach driving is not needed every hour but rather every 24 hours, confirming I8's story. Moreover, Tineke was the only one to offer the human-centred clarification that frequent beach driving can annoy beachgoers and put their safety at risk.

4.4 Social Legitimacy Underlying TRAs

Having discussed interpretations of the social legitimacy of the SRA and Green Beach policy, interpretations of TRAs remain. These interpretations will be shared below from the angles of

input legitimacy (in Section 4.4.1) and output legitimacy (in Section 4.4.2), and translated into a new overview of key responsibilities, roles and partnerships (in Section 4.4.3).

4.4.1 Input Legitimacy

Policy Design Review findings: Encoded Core Themes

Drawing from TRA’s rationale (p. 5), two core themes surface: beachgoers’ needs and seals’ needs. The following sections will further discuss their meaning in the SRA and TGB’s context.

Theme 1: Beachgoers’ Paramount Needs

As Section 1.1 (p. 1) hinted, TRAs are rooted in the intention to give seals room to recover on the beach while also giving humans room to roam that beach. Combining this intention with the interpretation of beachgoers’ needs in Green Beach policy (see Section 4.3.1, p. 48), in the context of seal rehabilitation on Green Beaches, this implies that TRAs view beachgoers’ paramount needs as beach access and nature education.

Theme 2: Seals’ Paramount Needs

Like TRAs, as Sections 4.2.1 (p. 34) showed, the SRA and Green Beach policy are rooted in the intention to give animals room to recover on beaches. In the context seal rehabilitation on Green Beaches, this insinuates that TRAs see seals’ paramount needs as beach access and room to recover.

Interview findings: Interviewees’ Perceptions Concerning Themes 1 and 2 of TRAs

Table 14 indicates the things interviewees considered regarding the paramount needs of beachgoers and seals. These are the first and second core themes of TRAs respectively.

Table 14. Overview of things interviewees considered seals and humans’ paramount needs

TRA’s key theme	Things considered important [ref code]
Paramount needs of beachgoers	<ul style="list-style-type: none"> - Resting in nature [I1, I2] - Clear signage [I3] - A long walk on the beach [I4, I6] - Seeing a Green Beach, so not seals in particular [I4, I5] - Giving nature and animals room to do their things [I7] - Human and seal safety/keeping distance from seals [I8] - Recreation [T] with the feeling of being in nature [I11] - Involvement: beach access and the chance to experience an adventure (e.g. seeing things and walking) [A] - Education about what they can see and do [I3, I9, A]
Paramount needs of seals	<ul style="list-style-type: none"> - Resting on a beach [I1-I7, A, T]/sandbank off the coast [I9] without being disturbed by humans and dogs - A piece of land (i.e. natural environment) to rest, feed pups, and for Vitamin D production in their skin [I11] - Rest (i.e. not being chased into the water): ill seals want that as they feel miserable and healthy seals want to lie on land [I10] - Waterway: to swim away fast if they want to [I9, A, T] - Rest and room in the broadest sense of the word [I3]

As [Table 14](#) (p. 55) shows and Tineke mainly did not know, the interviewees considered resting in nature, clear signage, Green Beach access and experiences, giving seals room to rest undisturbed, education on things to see and do, and safety as the paramount needs of people who visit a Green Beach with a TRA. On the flip side, as Tineke mainly did know, a waterway to swim away when wanted and a piece of land to rest, feed young and absorb Vitamin D without being disturbed by humans were seen as seals' paramount needs. [Table 14](#) also means to convey that I11, I9, I1, I2, Ad, and Tineke said all seals, whether ill or not, need rest and naturally haul out on beaches few people visit. Moreover, the table builds on I3's clarification that "rest and room in the broadest sense of the word" refers to the conservation of nature for animals, plants and humans. This is Natuurmonumenten's overall goal and implies to I3 that seals are included too.

4.4.2 Output Legitimacy

Policy Design Review findings: Encoded Ideal Goals and Strategies

Ideal Goal

TRAs' ideal goal, as the Literature Review Chapter (p. 8) told, is predefined as coexistence. This implies it is deemed unnecessary to elaborate on ideal goals in this part of the study.

Most Efficient Strategies: General

The Literature Review Chapter also mentioned that TRAs themselves are seen as the most efficient strategy to achieve coexistence. However, as the Introduction Chapter (p. 1) revealed, it is currently unclear what tools are necessary to create TRAs. Marrying the strategies mentioned in the SRA (see Section 4.2.2, p. 44), Green Beach policy (see Section 4.3.2, p. 50) and the section on TRA's rationale (see p. 5), the following tools are thus assumed to be vital for their creation on Green Beaches: signage, education, collaboration, communication, research, communication and training.

Specific Strategy

Moreover, specifically for minimising human disturbance, it is assumed the strategies that the section on the SRA's rationale (see p. 4) emphasises could be most efficient. To recap, these strategies include enforcement, education, a hotline, cordoning off areas/rope barriers/zoning and relocation of the seal to a (part of the) beach where it is quiet.

Of all strategies, as Sections 1.4 (p. 5) and 4.1.1 (p. 27) showed, the SRA and Green Beach policy only do not specify for enforcement of which stakeholder this is the responsibility. Section 1.4 (p. 5) also revealed that WAZ suggests enforcement could be the responsibility of seal guardians with a BOA status. When trying to fit enforcement in [Figure 7's](#) (p. 31) overview of responsibilities and roles, in TRAs' context, this study thus takes on WAZ's interpretation.

Interview Findings: Interviewee's Perceptions of Efficient Strategies

General Strategies

In [Table 15](#) (p. 57) is shown which tools the interviewees considered necessary to set up a TRA for seal rehabilitation on Green Beaches. This table is the condensed version of the table that can be found on page 130. While reading (the in-depth version of) [Table 15](#), note that strategies and tools were used interchangeably. Furthermore, it is important to keep in mind that besides tools, the interviewees also brought up points of attention for the creation of TRAs. These points were thought to be self-explanatory by the interviewees and are listed as considerations or the first strategy in (the in-depth version of) [Table 15](#).

Table 15. Overview of tools and strategies interviewees saw as best for creating TRAs on any Green Beach (blue), at De Kwade Hoek (green) and physical barriers' usefulness herein (red)

Explanation [ref code]	Strategy perceived best
<ul style="list-style-type: none"> - Natuurmonumenten prefers few <i>poles</i> due to visual pollution [I3] - Controlling where the beach and sea separate is hard [I7] - Seals not always stay where they are put for observation as they are not static [I1, I2, I8, I10], meaning they can move to other parts of the beach [I8, I10], onto walking paths [I8], and to the water and swim away [I8, I10]. This makes a <i>rope gate</i> impractical [I1, I2] - Physically closing off part of a beach is not always helpful due to disruption (e.g. the sound of <i>plastic ribbons</i> fluttering in the wind and people who continuously move <i>picket poles</i> when seals move) [I1], the tide (e.g. <i>picket poles</i> and <i>signs</i> wash away) [I2, I3], the stealing of <i>signs</i> [I2], and seals do not always stay where they are found/put for observation [I1, I2] 	Considering
<ul style="list-style-type: none"> - Using <i>the part that is cordoned off in the nesting season</i> [I3-I5, I9, A] - Not using the part for nesting birds as <i>cars</i> can disrupt their rest [I10] - Blocking access for people to the TRA with a <i>physical barrier</i> (e.g. <i>fence</i>) [I11]/putting <i>ropes</i> between the <i>row of wooden poles</i> [I3] and adding a(n s-shaped) <i>walking path</i> around it (e.g. from the waterline to the dunes and back) [I7, I8, A] and <i>tower viewer</i> [A] so people can watch seals from afar, have beach access [I7, I8, A, T] and walk to the northern tip [I4] - <i>Permanently closing a part</i> where few people come [I6, I7]/near the Haringvliet Dam where birds always are and seals rest at times. Natuurmonumenten already explores this [I5, I9] - Marking seals with <i>biodegradable spray</i> to tell them apart and they are observed [I10, T] - Selecting a part for year-round use [I8] and only indicating the TRA on the <i>map</i> for the permit as physically closing off the beach is not always possible, and few people visit it [I3] 	Zoning
<ul style="list-style-type: none"> - Natuurmonumenten must <i>permit</i> part of its beach can be cordoned off for seal rehabilitation [I1, I10, A], for placing <i>signs</i> about seals [I3], and make agreements with Rijkswaterstaat on roles as the beach grows seawards [I4, I5] - Natuurmonumenten should consult A Seal (i.e. the closest SRC) and its seal guardians for advice on [I8]/<i>involve organisations with a stake in beach use</i> in [T] the design of a TRA - Natuurmonumenten should consult landscape specialists about ways people can access the beach behind the TRA since that area otherwise becomes inaccessible [I8] 	Collaboration
<ul style="list-style-type: none"> - <i>Orally telling stories</i> on the beach about seal rehabilitation [I4, A] and where to watch seals responsibly (i.e. without disturbing them) [A] - Teaching about seals on the <i>beach community's website</i> [A] 	Education
<ul style="list-style-type: none"> - To state (why) the TRA is off-limits [I3, I9-I11, A] - To explain seals can rest on the beach and seal encounter rules [I1, I2, I4, I5, T]. <i>Yellow signs from the SRA's website</i> are particularly apt for this and to avoid they wash away they could be placed on <i>wooden beach posts</i> [I1, I2] and at beach entrances [T] 	Signage
<ul style="list-style-type: none"> - Clearly communicating marked seals are being observed since seal rehabilitation increasingly happens on the beach, not in an SRC [I10] - Creating and implementing a <i>communication plan</i>. <i>Signage</i> should be part of this [I1, I2] 	Communication
<ul style="list-style-type: none"> - Someone who <i>informs beachgoers</i> they must keep distance from seals, but this does not necessarily have to be done by a seal guardian [I8] - When (partially) cordoning off the beach, <i>enforcement</i> is crucial as not everyone will adhere to the rules about keeping distance from seals [I7, I8], read or care about information on the signs [I3, I10] and like they suddenly cannot walk where they always did [T] 	Enforcement

The blue italicised words in (the in-depth version of) [Table 15](#) on the previous page indicate the tools that the interviewees considered necessary to set up a TRA on *any* Green Beach. These tools cover a biodegradable spray, (wooden posts at beach entrances with) yellow signs from the SRA's website, a communication plan, enforcement, and education through storytelling, an information cart, experiencing the lives of seals without disturbing them, and the SRA and beach community's website. Of all these tools, Tineke thought that signage a biodegradable spray and enforcement would generally be considered best. Additionally, emphasis was put by I4, I5 and Ad on centralising education around the sea and beach life that seals are part of. As (the in-depth version of) [Table 15](#) conceals, moreover, I1 and I2 wondered if a central website for seal reports would work since they were told the SRA is created with them "but everything else that comes with [realising] it is up to you".

Furthermore, the tools written in red and italics in (the in-depth version of) [Table 15](#) indicate that the usefulness of physical barriers, both in general and at De Kwade Hoek, was considered questionable. I1-I3, I8 and I10 namely said that physically closing off part of the beach is impractical given the sound of plastic ribbons fluttering in the wind, the continuous coming and going of people to move around picket poles when seals move outside of the barrier will disrupt seals, picket poles and signs can wash away at high tide, signs might be stolen, and seals not always stay where they are found or put for observation as they are not static. Nevertheless, (the in-depth version of) [Table 15](#) also shows that I3-I5, I9 and Ad thought that resting areas for birds could also be used for seals since they are already cordoned off in the nesting season (see e.g. [Figure 4](#), p. 6). I10 was less fond of I3-I5, I9 and Ad's idea and argued cars might disrupt the birds' rest. Besides, I10's reasoning contradicts I5 and I9's perception that the part near Haringvliet Dam in the north of De Kwade Hoek could be used as TRA.

When singling out De Kwade Hoek, the green italicised words in (the in-depth version of) [Table 15](#) on the previous page detail which tools were considered essential. These are a map, a permit, enforcement, education (including through GO Goeree-Overflakkee's website) and a rope between the row of wooden poles surrounded by walking paths, signage and a tower viewer. To elaborate, I3 and I8 mentioned it would be best to select an area that can be used year-round and include a map of that area to the permits Natuurmonumenten issues for handling seals. In addition, I3 said a rope could be put between the row of wooden poles (see [Figure 5](#), p. 6) if choosing to create a physical barrier for people. I4, I6-I11 and Ad added to I3's idea that walking paths around the TRA, a tower viewer and signage would be helpful tools to make sure people still have beach access and are educated on seal interaction rules and rehabilitation and that TGB could provide such tools. However, it is not guaranteed that beachgoers will adhere to seal interaction rules, read or care about the signs, and appreciate that they suddenly cannot walk where they always did. I3, I7, I8 and I10 therefore mentioned on-site oral communication of seal interaction and rehabilitation rules, and enforcement are vital too. As (the in-depth version of) [Table 15](#) on the preceding page shows, in combination with beach access, this was also confirmed by Tineke. She anticipated that TRAs will be most successful when it is ensured that people have beach access and follow the rules.

Going beyond what can be seen in (the in-depth version of) [Table 15](#), Natuurmonumenten also said they are already conducting a test collaboration with A Seal and its seal guardians. Their partnership mainly comprises a permit to lay seals at a designated spot somewhere in the bird resting area (see [Figure 4](#), p. 6) and an evaluation of how they experienced working together. Moreover, Natuurmonumenten expressed a strong interest in

this study's findings to make further improvements and underlined the rest and room De Kwade Hoek offers lends itself to seal rehabilitation. However, they will keep the TRA's location to themselves as they do not want to attract mass tourism. As for A Seal, they emphasised they "require a place where we can lay animals" (I8) near their SRC and affirmed that De Kwade Hoek could indeed be suitable for seal rehabilitation due to its spaciousness and quietness.

There are also two answers related to collaboration from (the in-depth version of) [Table 15](#) (p. 57) that need further highlighting. The first one regards I4 and I5's answer that the beach's seaward growth implies Natuurmonumenten should make agreements with Rijkswaterstaat on who is responsible for what apropos of water and beach management. However, it could also be that a part of the beach becomes inaccessible when using physical barriers to create a TRA. The second one therefore involves I8's remark that a landscape specialist should be consulted for advice on how to surround it with walking paths.

Specific Strategies: Handling Bystanders Causing Disturbance

Besides strategies for creating TRAs, the interviewees also shared which strategies they considered best for handling bystanders who disturb stranded seals in TRAs' context. However, as [Table 2](#) (p. 22) indicated, these strategies were shared not only in TRAs' context but also that of the SRA. Since the interviewees gave similar answers in both contexts, their answers are merged into one table. This table concerns [Table 16](#) and can be found below.

Table 16. Overview of strategies interviewees saw as best for handling disturbance

Explanation [ref code]	Strategy perceived best
<ul style="list-style-type: none"> - Transporting the seal in a box by car to another beach where they will not be disturbed [I1, I2]. This applies to weaned pups and adults [I11] - Seal guardians can act alone (i.e. put the seal in the car and drive to another beach) when quick decisions need making to guarantee the seals' and/or bystanders' safety [I1, I2] - Transporting the seal to an SRC as soon as possible when it is clear it needs help [I7] 	Procedure
<ul style="list-style-type: none"> - The seal guardian stays calm [I9, I10] and informs bystanders (why) they must keep distance [I1, I2, I8, I10, T], what they are doing with the seal and about seal rehabilitation [I1, I2]. They should learn this during their training [I9] - Using signs to explain seals are being observed and distance must be kept from them [A] 	Education
<ul style="list-style-type: none"> - BOAs (the volunteer surveillance team's leader) and the police have the authority to deal with people who disobey the rules [I1, I3, I6, I11, T] 	Enforcement
<ul style="list-style-type: none"> - Calling the police (who knows which BOA is on duty) or BOA (who Natuurmonumenten hires) to request assistance if needed [I3, I6, I11, T] - Members from the beach community and volunteer surveillance teams ask people to follow the rules, especially about distance and keeping dogs on leads [I3-I5] 	Communication/ Phone Number

As [Table 16](#) illustrates, to handle situations where bystanders disturb stranded seals, I1-I5, I8-I10 and Ad said it is firstly vital that seal guardians, the beach community (i.e. NLGO's volunteers), the volunteer surveillance team and signs tell bystanders (why) distance must be kept from seals. However, if bystanders do not listen and thus do not keep their distance from seals, I3, I6 and I11 clarified a BOA could be called in for help. I3, I6 and I11 also said this can either be done by calling the police (who will know which BOA is on duty) or the BOA itself (who leads the volunteer surveillance team and Natuurmonumenten employs). If, for some

reason, enforcement is not possible, the answers grouped under procedures in [Table 16](#) (p. 59) indicate that I1, I2 and I11 said that seal guardians should (be able to act alone and) move weaned and adult seals to a beach where more rest can be guaranteed. Or, as the answer of I7 that [Table 16](#) captures says, seals must be brought directly to an SRC when it is clear they need help.

Delving further into and beyond the data [Table 16](#) shows, it is important to call to mind while reading it that Tineke confirmed education, enforcement and communication/phone numbers are key strategies for handling bystanders who disturb stranded seals. Moreover, note that I3 mentioned the only downside of enforcement is that it can take a long time until a BOA arrives as De Kwade Hoek's coastline is long. This means, I3 further clarified, that the surveillance volunteers, seal guardians and NLGO's volunteers may only admonish people if they sense that their own safety is not at stake.

4.4.3 Responsibilities, Roles and Partnerships

Lastly, when aligning [Figure 7](#) (p. 31) with interviewees' perceptions of their responsibilities, roles and partnerships in creating a TRA for seal rehabilitation at De Kwade Hoek and the main findings of Sections 4.3 (p. 48) and 4.4 (p. 54), several changes are needed. [Figure 9](#) on the next page sums up these changes.

As can be seen in [Figure 9](#), the responsibilities and roles that [Figure 7](#) (p. 31) originally established are enriched with a communication plan (see information icon), enforcement (see policeman icon) and TRA consultancy (see lamp icon). Furthermore, [Figure 9](#) (p. 61) contains adjusted meanings for the responsibilities and roles of facilitation (see handshake icon) and physical barriers (see tape icon). In terms of partnerships, lastly, [Figure 9](#) adds Duinbehoud, Rijkswaterstaat, the police, and Natuurmonumenten's surveillance volunteers and BOAs to the ones originally set out in [Figure 7](#) (p. 31). The rest of this section will further detail the changes to the initially established responsibilities, roles and partnerships that [Figure 9](#) (p. 61) summarises.

Starting with the communication plan, [Figure 9](#) conveys it is jointly drafted by the SRCs and MMROs and targets signage, on-site oral storytelling and the media. Additionally, it tells that under A Seal's coordination, the plan is aligned with that of Natuurmonumenten, NLGO and (via NLGO with) GO Goeree-Overflakkee and used to train EHBZ and NLGO's volunteers in oral storytelling. Emphasis is assumed herein on the sea and beach life that seals are part of and the pooling of resources by A Seal, Natuurmonumenten and NLGO for implementing the plan at De Kwade Hoek.

Besides the communication plan, [Figure 9](#) assumes that A Seal, Natuurmonumenten and NLGO could pool resources for the creation of a rope (i.e. physical) barrier. It also assumes that A Seal, Natuurmonumenten and NLGO could pool resources to surround the barrier with walking paths, signs and a tower viewer to safeguard the goal encoded in Green Beach policy to offer beachgoers nature experiences. In case a physical barrier is deemed unnecessary, signage is assumed central. The tape icon in [Figure 9](#) clarifies that this could mean adding more details on seals to the existing sign about Green Beaches at the entrance to De Kwade Hoek. Moreover, the tape icon emphasises the use of the yellow sign from the SRA's website (see [Figure 3](#), p. 5) and that it could be put on wooden posts at the entrance to De Kwade Hoek and picket poles near the seal (i.e. in the sand between the high-water line and dunes).

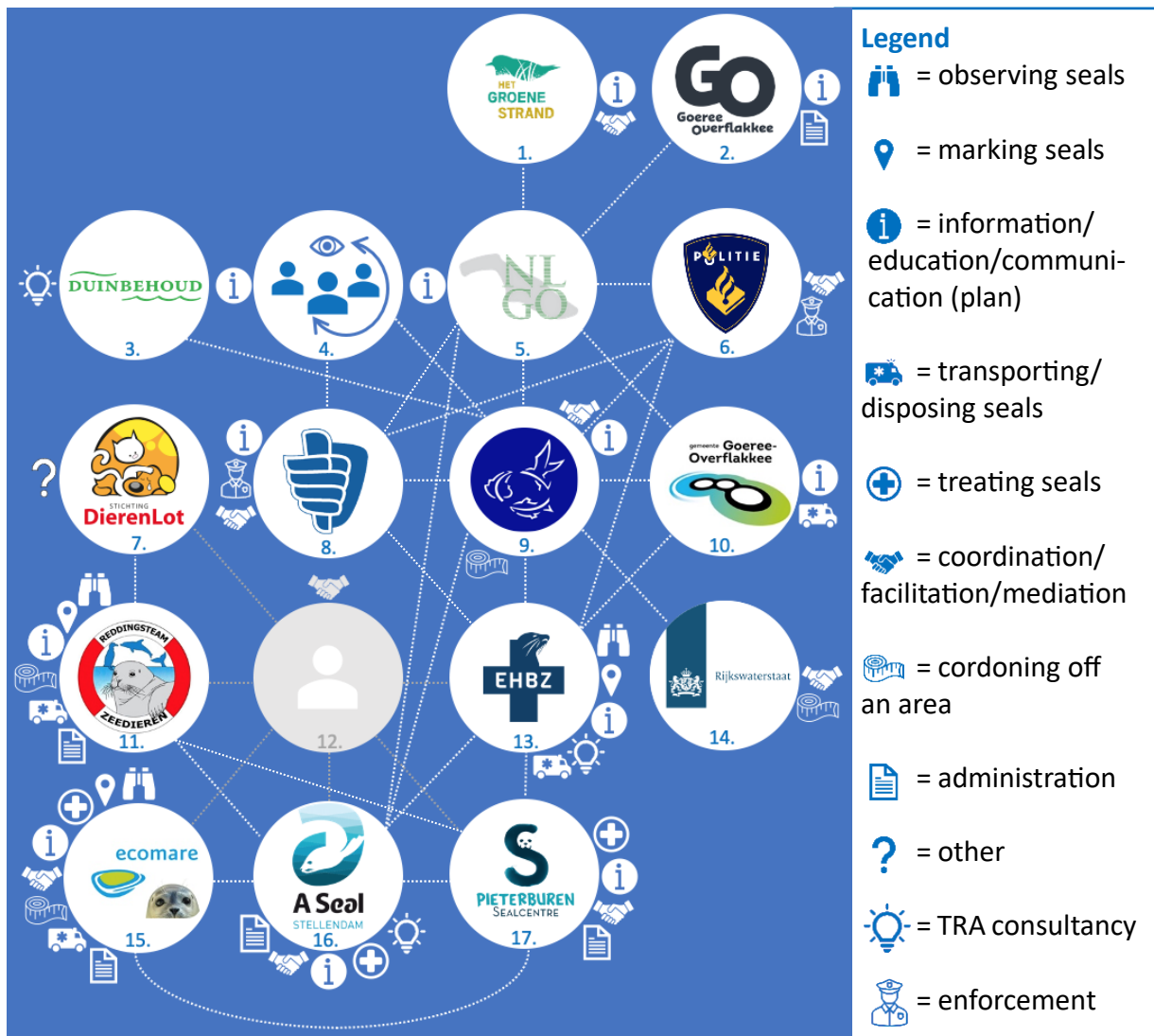


Figure 9. Overview of the responsibilities, roles, and partnerships involved in creating TRAs at De Kwade Hoek. The partners: TGB (No. 1), GO Goeree-Overflakkee (No. 2), Duinbehoud (No. 3), surveillance volunteers (No. 3), NLGO (No. 5), the police (No. 6), DierenLot (No. 7), BOAs (No. 8), Natuurmonumenten (No. 9), the municipality of Goeree-Overflakkee (No. 10), RTZ (No. 11), mediator Tineke Schokker (No. 12), EHBZ (No. 13), Rijkswaterstaat (No. 14), Ecomare (No. 15), A Seal (No. 16), and Pieterburen (No. 17)

Regardless of whether a physical barrier is used to create a TRA, the lamp icon in Figure 9 signifies that a dune consultant (e.g. Duinbehoud, a founder of TGB) is always involved in its design. The handshake icon in Figure 9 further adds that Natuurmonumenten must include a map of the TRA's location in its permit and co-host a meeting with Rijkswaterstaat for all beach drivers to discuss (upgrades for) the beach driving rules. This is due to their overlapping work areas (i.e. Rijkswaterstaat manages the sea and Natuurmonumenten the seaward-growing beach). In case paths for beach driving are marked with wooden posts, besides, this overlap and the handshake icon assign a joint responsibility to Rijkswaterstaat (e.g. for providing posts) and Natuurmonumenten (e.g. for placing the posts).

The TRA, however, should not be mistaken for ready when all the above elements are in place. As the policeman icon next to the police and BOAs in Figure 9 namely indicates, seals'

undisturbed rest can only be ensured when factoring in enforcement. Sections 4.3.2 (p. 49) and 4.4.2 (p. 55) clarify how and when they can get involved by partners as surveillance volunteers.

Finally, regarding Tineke's role in the creation of TRAs, Tineke underlined that SRCs and MMROs must "resolve [issues] themselves in the first instance . . . I must be completely redundant". Therefore, the circle encapsulating Tineke, the handshake icon next to it and the dotted lines connected to it are greyed out in [Figure 9](#) (p. 61). This means [Figure 9](#) should be interpreted as if all SRCs and MMROs are directly connected to each other.

5 Discussion

In this chapter, the previous chapter's findings are reflected in light of the literature review in Chapter 2 and the research problem and rationales of PDs as posed in Chapter 1. Implications for the institutionalisation of coexistence will be the main focus of this reflection. Accordingly, structure of this chapter seeks inspiration from the conceptual model (see Section 2.3, p. 16). Section 5.1 will focus on responsibilities, roles and partnerships, Section 5.2 on input legitimacy and Section 5.3 on output legitimacy. The chapter ends with a revision of the conceptual model. This revision is based on the discussions in Sections 5.1 through 5.3 and can be found in Section 5.4.

5.1 Responsibilities, Roles and Partnerships

This study theorised that responsibilities, roles and partnerships are embedded in PDs and that these PDs are shaped by and in turn shape social legitimacy, institutions and organisations/stakeholders. As per the Results Chapter, the interviewees shared numerous responsibilities, roles and partnerships beyond those encoded in the PDs. For example, while the PDs said that BOAs should be responsible for enforcing beachgoers to keep their distance from stranded seals, interviewees noted links with parties such as the police and beach manager and hinted at the importance of considering one of the PD suggestions to grant seal guardians a BOA status. Another example would be that the interviewees mentioned collaborations between RTZ and DierenLot for resource provision whereas DierenLot goes unmentioned in the PDs.

Thus, to institutionalise coexistence fully, the theory and results emphasise that it is crucial to integrate into the PDs the above additional insights into responsibilities, roles and partnerships the interviewees mentioned. After all, by making these changes, the organisations/stakeholders that manage the institutions of which the PDs are a part will be able to better establish and maintain these PDs and their responsibilities, roles and partnerships.

Zooming in on partnerships, this study particularly focussed on public-private ones at regional levels and the joint pursuit of outcomes that cannot be achieved by one organisation independently. Where the focus on public-private partnerships resonates with the findings of this study, regarding their level, some interviewees noted that, given seals' migratory nature, the success of the SRA in achieving coexistence ultimately hinges on the regulation of seal rehabilitation on a European level. The PD review findings indeed highlight the migration of grey and harbour seals across various European countries. However, as the literature review findings about social legitimacy in Chapter 2 (see p. 10) suggest, pan-European PDs require embracing each country's perceptions of seal rehabilitation procedures. Instead, in the context of Green Beaches, this study's findings thus signal that achieving coexistence might be more successful when integrating these other countries' perceptions (see [Appendix J](#), p. 132), expanding the focus of partnerships to an international level. Moreover, the new focus would involve expanding institutions and organisations/stakeholders to an international level as well, given that it is theorised that partnerships are shaped by and in turn shape these components.

Lastly, the interview findings regarding things like the seaward expansion of De Kwade Hoek indicate that partnerships are shaped not only by outcomes that require joint efforts but also by literal work area overlaps, that is, geographically speaking. Consequently, in the context of Green Beaches, the findings suggest refining the conceptualisation of partnerships with a link to overlapping geographical work areas. This would ultimately mean for the definition of

coexistence that a “shared landscape” not only involves an overlap between the geographic areas of wildlife and humans (which Carter & Linnell, 2016 assume) but also the spatial distribution of humans within those areas.

5.2 Input Legitimacy

Besides responsibilities, roles and partnerships, this study also posited that social legitimacy informs a PD and that the interplay between social legitimacy, PDs and organisations/stakeholders eventually determines whether an institution is accepted and followed. The first form of legitimacy studied was input legitimacy, which refers to the preferences or things considered important regarding a PD’s core themes. Specifically, in situations where the input legitimacy of the PD(s) within an institution gives rise to or comprises dissenting voices, it was theorised that they will manifest as conflicts over wildlife management. The following sections will delve deeper into conflicts and their relation to social legitimacy (see Section 5.2.1), and the institutionalisation of coexistence in relation to input legitimacy (see Section 5.2.2).

5.2.1 Social Legitimacy in Relation to Conflicts

This study theorised that dissenting voices regarding wildlife management (i.e. human-human conflicts) are often sparked by situations in which people’s needs and actions impact wildlife or vice versa (i.e. human-wildlife conflicts). It also adopted the theory that human-human conflicts may arise due to clashing rule mandates and that conflict resolutions require dialogue about responsibilities, roles, partnerships and input and output legitimacy. While not primarily focussing on the manifestation of rule-induced HWCs, however, the interview and PD review findings indicate various refinements in the context of human-seal coexistence on Green Beaches. Where Section 5.1 covered these refinements for partnerships, responsibilities and roles, those for social legitimacy will be discussed below.

Entities Involved in Human-Wildlife Conflicts that Spark Human-Human Conflicts

First, the references in the PD review and interview findings to beach driving, dogs and birds suggest that the entities involved in human-wildlife conflicts that spark human-human conflicts extend beyond humans with a stake in wildlife and the two studied wildlife species. Beach drivers were particularly noted to be humans who use De Kwade Hoek together with seals, engaging primarily in activities unrelated to the animals but impacting their needs and actions. It further emerged that actions of humans/stakeholders in general who use De Kwade Hoek tend to impact not only stranded harbour and grey seals but also beach birds and dune vegetation. Moreover, when bringing dogs, both humans and their pets were considered to be entities that could (be) impact(ed) by seals. Following the findings of the PD review on Green Beaches’ criteria regarding birds and beach driving and of studies on human-dog-seal conflicts from Elmahdy (2022), Van der Linde et al. (2022) and Gompper (2014), it would therefore make sense if the main entities involved in human-wildlife conflicts that spark human-human conflicts were understood to include any human (i.e. stakeholder) that uses the same beach as seals, dogs, birds and dune vegetation.

Zooming in on seals, furthermore, the interview findings reveal that both live ones and carcasses could be involved. In the wake of Green Beaches’ intention to boost beach biodiversity and Janssen’s (2008) finding that healthy Dutch sandy shores contain both live and dead organisms, it thus appears that the entities involved in human-wildlife conflicts that spark human-human conflicts do not necessarily have to be alive.

Lastly, the direct involvement of entities like dune vegetation, seal carcasses and dogs in the manifestation of human-human conflicts suggests that the current definition of wildlife needs tweaking. Initially, this study defined wildlife as free-roaming animals or, following Carter and Linnell's (2016) definition of coexistence, as large carnivores. However, there is increasing evidence in wildlife conservation studies that wildlife should include uncultivated plants and (carcasses of) all kinds of free-roaming animals (Tian et al., 2023; Krausman & Cain, 2022; Reidinger Junior, 2022; Tucker et al., 2021). Accordingly, it could be more fitting to equate wildlife with uncultivated plants and (carcasses of) free-roaming animals. When combining the new definition of wildlife with the existing approach to human-wildlife conflicts (see p. 64), in the case of De Kwade Hoek, this means that live seals, seal carcasses, birds and dune vegetation would make up the wildlife part of the equation. Stakeholders would then fall under the human part. Following the example of studies from Elmahdy (2022), Van der Linde et al. (2022) and Gompper (2014), moreover, dogs could be added as a new part of the equation. This would mean that, when dogs are involved, the name of the term human-wildlife conflicts is more accurate when expanded to include human-wildlife-dog conflicts. In addition, the proposed tweaks for the definition of wildlife and the name of the term human-wildlife conflicts would focus PDs on the full range of potential conflicts as presented above instead of just humans and seals, resulting in more comprehensive dialogues among stakeholders on responsibilities, roles, partnerships and input and output legitimacy in situations where human-wildlife conflicts arise.

Rule-Related Sparks of Human-Human Conflicts

As to rule-related causes of human-human conflicts, the data illuminates the involvement of clashing mandates of rules. Additionally, it introduces discrepant meanings within PDs and emphasises the need to acknowledge the influence of the media. Beginning with the clashing mandates, the PD review findings confirm that some rules focus on wildlife and their habitats whereas others include human interests too. An overview in the context of human-seal coexistence on Green Beaches:

- **Wildlife-habitat scenario** – Wnb, CWH, CMS, Habitats Directive and the Agreement on the Conservation of Seals in the Wadden Sea
- **Human-inclusive scenario** – WD and Green Beach policy

More precisely, the PD review findings show that a PD – not just an institution – can consist of multiple rules and that these rules can have clashing mandates and be cited incorrectly. For example, it was shown that SRA consists of all the above rules minus Green Beach policy, implying human-human conflicts are fed by preferences for the different mandated scenarios. Besides, while reviewing the SRA's references to these rules, it was found that the annexes of the CWH and Habitats Directive applying to grey and harbour seals were incorrectly cited. This error occurred even though correct references were made to the meanings of the right annexes and the SRA's foundational work (WAZ's report) correctly cited them. To fully grasp rule-related sparks of human-human conflicts, the PD review findings thus specify it should be recognised that not only an institution but also a PD can comprise multiple rules. Otherwise, the findings confirm the need to look at the mandates of these rules and potential clashes.

Regarding the discrepant meanings within a PD, these emerged in the interview and PD review findings as a difference between a PD's legal, scientific and practical meanings. An example of this difference is the difficulty of establishing a stranded seal's situation on the beach using the

SRA's indicators and the duration of the observation period herein. The observation period was found to be based on WAZ's scientific findings and set at 24 hours. However, it was also found that things like storms and adrenaline – which the SRA does not cover – make it hard to identify a seal's situation and that one of the rules that shape the SRA, namely the Wnb, says that ill and wounded seals can be taken to SRCs for treatment, provided this is done within 12 hours. If a stranded seal's situation is established as one that warrants admission to an SRC after 12 hours, it may thus be admissible practically but not legally. Moreover, it would leave the scientific implication for rehabilitation (i.e. 24-hour observation) as the only viable option, regardless of people's preferences. Consequently, to fully recognise human-human conflicts with PD-related causes, the PD and interview findings highlight the importance of considering a PD's practical, scientific and legal implications, and especially the differences between these implications.

Finally, the refinements regarding the media flow from the interviewees' comments that the media tends to feature seals caught in fishing nets and wrongly accuse fishermen for the bite marks in harbour porpoises. While stranded seals encompass more than those caught in nets (see p. 34) and studies reveal porpoises' bite marks are caused by grey seals (e.g. IJsseldijk et al., 2024; Gilbert et al., 2020), the media may present information about wildlife differently. In studies on HWC framings in the media, this is attributed to their inclination to neglect ecology, biology and tourism-related aspects and to centralise negative effects on and of wildlife (Arbieu et al, 2021; Guenther & Shanahan, 2020; Pagel et al., 2020).

Furthermore, while the media are not explicitly identified as the target group, the PD review findings about the communication plan suggest that conflicts might be framed more holistically when detailing how and what information SRCs and MMROs share with the media. Accordingly, the interview and PD review findings indicate that human-human conflicts may arise when a PD neglects responsibilities, roles and partnerships in relation to the media.

5.2.2 Input Legitimacy in Relation to the Institutionalisation of Coexistence

To institutionalise coexistence input legitimacy-wise, this study theorised that addressing stakeholders' preferences or things they consider important regarding the core themes of an institution's PDs is essential when human-human conflicts arise. Otherwise, as [Figure 6](#) (p. 16) implies, dissenting voices get stuck in a vicious circle between SL, HWC and RRP.

The results of this study show that there are dissenting voices and that the things considered important or preferred by the stakeholders are not always addressed in the respective PDs. One of the clearest instances is that while the SRA interprets admittance to SRCs as the default rehabilitation procedure for seriously ill seals, it was found that stakeholders' perceptions of good rehabilitation procedures for seriously ill seals range from admitting any ill seal to only those with human-induced causes and not admitting any seal at all (i.e. always leaving them on the beach). Or, as another example, Green Beach policy conveys nature education as the only need of beachgoers, whereas the stakeholders were also found to talk about things like being in nature and safety. Considering as well that the PD review findings reveal that the 2021 dispute settlement notes say the planned merger between MMROs should be suspended yet leave the conflicting parties' perceptions of the SRA's input legitimacy unaddressed (see Section 4.1.1, p. 27), this study's results consequently suggest that the stakeholders involved in human-seal interactions on Green Beaches are stuck in the above-mentioned vicious circle.

To escape the vicious circle and achieve coexistence, moreover, the results reinforce the above-mentioned theory regarding the importance of including stakeholders' perceptions of core themes' social legitimacy in the PDs that shape an institution. After all, only then do dialogues targeting occurring human-human conflicts have the potential to give birth to resolutions that are socially accepted and followed or, as the title of this report conveys, create a "happy society".

Moreover, when the dialogue touches on rule-related sparks of dissent, the PD review showed that WAZ advises using these rules as guidelines. The preceding discussion on (escaping) the vicious circle further adds that this means that stakeholders' interpretations of good and bad rehabilitation procedures should guide the decision on which rule is eventually followed. Besides, including perceptions of good and bad rehabilitation procedures could help those who struggle with forming a perception of such procedures, which the interview findings showed is especially the case for the SRA's theme of suffering.

5.3 Output Legitimacy

The final form of legitimacy studied was output legitimacy, defined as goals and strategies considered ideal within the context of a PD. Behind this definition was the theory that solely addressing a PD's input legitimacy might be insufficient to escape the vicious circle between SL, HWC and RRP when dealing with human-human conflicts.

Generally, in Green Beaches' context, the PD review and interview findings imply that stakeholders' goals and strategies not only reflect but also refine those encoded in the PDs, especially in relation to the core components of an institution, the PD's criteria and input legitimacy. Section 5.3.1 will elaborate on these findings regarding goals and Section 5.3.2 regarding strategies.

5.3.1 Goals

The PD review shows that the SRA aims to allow stranded seals to recover as much as possible on the beach, ideally the one where they are found. Additionally, it shows that Green Beach policy aims to allow the conservation of animals and plants living on beaches and human experiences of that life to go hand in hand. TRA's goals were predefined as coexistence and thus not further examined.

Interviewees' answers were generally along the lines of "letting nature take its course" (regarding the SRA) and "humans and dogs keep their distance from seals" (regarding Green Beach policy). The implications of these answers not only align with the goals of the respective PDs but also with the rationales behind these goals, namely: to boost beach biodiversity and to enable humans and seals to share a beach provided human disturbance is minimised (see Section 1.2, p. 3 and Section 1.3, p. 4). Accordingly, the PD review and interview findings suggest that Green Beaches as an institution for coexistence are generally accepted from an output legitimacy viewpoint.

However, not every interviewee mentioned the "as much as possible" part of the SRA's goal to let stranded seals recover on beaches. Indeed, the interview findings related to the SRA's input legitimacy show that not every interviewee favoured admittance to an SRC as the main alternative rehabilitation procedure for stranded seals. Additionally, various interviewees who mentioned "letting nature take its course" in response to questions about the SRA's input legitimacy gave the same answer to questions about its output legitimacy. This suggests that stakeholders' perceptions of a PD's input legitimacy inform their perceptions of that PD's

output legitimacy, not just the PD itself as initially theorised following Lute et al (2020) and Serenari and Taub (2019), adding a new dimension to their theory. Besides, the similarity in answers about the SRA's input and output legitimacy clarifies why Green Beaches as an institution for coexistence are not fully accepted in terms of their output legitimacy.

Moreover, the interview findings reveal that respondents generally expressed the ideal goals about distance and "letting nature take its course" in combination with awareness of seals' needs. Indeed, in environmental education and psychology studies, the theory that awareness of natural processes is key to achieving biodiversity conservation is widely adopted (Ardoin, 2020; Zamani et al., 2020; Clayton, 2012). Thus, this study adds to the studied PD's rationales by proposing that they might be stronger when they include a link to awareness of natural processes. Additionally, regarding the approach to a human-wildlife conflict, which was initially established following insights from scholars such as Fine et al. (2023), Mekonen (2020) and Frank et al. (2019), this study adds that fewer conflicts might happen or that occurring conflicts might be more easily resolved by means of linking biodiversity conservation and awareness.

Another finding that stands out is that interviewees brought up goals that were new to the studied PDs, for example, ensuring seal and human safety and minimising stress among seals caused by car rides. This finding is noteworthy as it supports the theory adopted by this study and mentioned in the introductory text to Section 5.3 (p. 67) regarding the escape from the vicious circle between SL, HWC and RRP requiring the inclusion into the PDs involved in the human-human conflict of stakeholders' perceptions of the output legitimacy of those PDs.

Lastly, various interviewees linked their ideal goals for Green Beach management with Green Beaches' criterion about beach driving and goals to boost beach biodiversity and enhance experiences with that biodiversity. For example, they acknowledged that beach driving is vital for humans to be able to rehabilitate seals but might come at the expense of seals' rest. This finding aligns with the theory adopted from Boevers (2008) that beach eco-labels should have both a more-than-human and human dimension, adding that the inclusion of these dimensions is also its core challenge. Moreover, since the criterion about beach driving suggests that not only seals but also entities like birds and dune vegetation might be impacted by human presence on Green Beaches, the interview findings emphasise the importance of considering the broader context of human-wildlife conflicts when forming an understanding of goals (see 5.2.1, p. 62 for this context regarding De Kwade Hoek).

5.3.2 Strategies

Regarding strategies, the PD review matched research, collaboration, communication, training and shifting the default rehabilitation location from SRCs to beaches with the SRA's goals on the one hand and education, signage, collaboration and zoning/agreements on beach use with Green Beach policy's goals on the other hand. Furthermore, TRAs were seen as a practical solution to achieve coexistence when human-wildlife conflicts occur and assumed in the PD review findings to be linked with signage, education, collaboration, communication, research, training, a hotline, relocation, enforcement and cordoning off areas/rope barriers/zoning.

Shifting the focus to the interview findings, they introduced numerous new clarifications – not included in the studied PDs – for the strategies. For instance, regarding the SRA, it was clarified

that signage might be most efficient in ensuring that humans keep their distance from seals when it also contains a QR-code to the SRA's website as well as instructions on how to recognise stranded seals and when it is placed both at beach entrances and near the seals. Another example regards the clarifications within Green Beach policy that education involves telling stories about (in)appropriate ways to interact with seals and how death is a natural part of seals' lives, among other things. Clarifications like these are interesting as they reinforce the theory that this study adopted and that is central to the discussion in Section 5.2.2 (p. 66) that breaking free from the vicious circle between SL, HWC and RRP necessitates incorporating into PDs involved in the human-human conflict the stakeholders' perceptions of the output legitimacy of those PDs.

Second, various interviewees linked their answers to rehabilitation procedures (see e.g. [Table 10](#), p. 47), which falls under the SRA's input legitimacy – not its output legitimacy. The interview and PD review findings thus suggest that stakeholders' perceptions of a PD's input legitimacy inform their perceptions of that PD's output legitimacy, further reinforcing a similar observation in the discussion in Section 5.3.1 (p. 65) on goals.

Third, the interview findings show that strategies identified for one PD in the PD review were not only linked by the interviewees with that PD but also with another one. For example, Green Beach policy's strategy of zoning/agreements on beach use was also brought up in connection with the SRA. The PD review and interview findings thus suggest that when an institution consists of multiple PDs, stakeholders' perceptions of efficient strategies in the context of one PD might inform their perceptions of those in another PD's context and vice versa, adding a new dimension to the initial understanding of output legitimacy that this study developed using insights from Lute et al. (2020) and Serenari and Taub (2019).

Fourth, the references in the PD review and interview findings to enforcement and parties like the police and BOAs suggest that besides the PDs themselves, output legitimacy also informs beliefs. This component of institutions emerged in Chapter 2's literature review (see p. 8) but was not given further attention. Building on Chapter 2's discussion, however, the interview and PD review findings thus underscore that enforcement, social legitimacy and a PD's responsibilities, roles and partnerships are interrelated and that institutions cannot exist if one of these components is omitted.

Fifth, especially regarding strategies related to goals surrounding Green Beaches' criterion about beach driving, the interviewees brought up parties (e.g. customs and the Reddingsbrigade) that go unmentioned in Green Beach policy. The interview and PD review findings consequently add to the initial understanding of the position of output legitimacy within an institution that this study developed using insights from scholars such as Ansell and Torfing (2022), Lute et al. (2020), Carter and Linnell (2016), Junginger (2013) and Greif (2006) that output legitimacy not only shapes a PD but also directly shapes the responsibilities, roles and partnerships encoded in that PD.

Sixth, particularly in the context of TRAs, the interviewees stressed the importance of considering the seaward growth of De Kwade Hoek's beach. Various scientific articles confirm this is indeed the case and explain this is due to the Brielse Maas being closed off from the sea in the 1950s and the constructions of the sand-drift dyke in the 1960s and Haringvliet Dam in

the 1970s (see [Figure 4](#), p. 6), changing the interplay between sea currents, wind and sand (Brackel, 2021; Prins et al., 2020; Reintjes, 2002).

The seaward beach growth seems an issue that applies to De Kwade Hoek Beach and Voorne Beach, although not necessarily other Green Beaches (Het Groene Strand, n.d.-e). Moreover, the beach's seaward growth led the interviewees to mention actions and partners that specifically targeted this issue. The interview findings thus expand on the initial understanding of the relationship between output legitimacy and PDs that this study gained from scholars like Lute et al. (2020), Serenari and Taub (2019) and Junginger (2013) by suggesting that while PDs need to centralise strategies for achieving coexistence in general, they will be most successful when also factoring in local issues, actions and partnerships.

Finally, specifically regarding the tools necessary to set up a TRA, the interview findings confirm the assumption made in this study that they include signage, education, collaboration, communication, research, training, a hotline, relocation, enforcement and cordoning off areas/rope barriers/zoning. While not all these tools might speak directly from the findings of the section on TRAs (see Section 4.4, p. 54), this is because the stakeholders assumed that their answers regarding RRP in Section 4.1 (p. 27) form the basis of TRAs. Besides, some interviewees repeated things they mentioned in Section 4.1 (e.g. storytelling) when addressing the output legitimacy of TRAs. Accordingly, building on the fifth point of this discussion about strategies, the interview and PD review findings add to insights from scholars like Ansell and Torfing (2022), Lute et al. (2020), Carter and Linnell (2016), Junginger (2013) and Greif (2006) that this study initially used to understand the position of output legitimacy within an institution by suggesting that output legitimacy not only shapes responsibilities, roles and partnerships but is also shaped by them. The insights gained from the other points in this section's discussion about strategies also apply to TRAs.

A new finding that stands out regards stakeholders' perceptions of the boundaries of a TRA. These were seen as not always needing to be physical. Instances in which physical (i.e. rope) barriers were perceived to be most ideal were those where the area that is already cordoned off for birds in the nesting season (see [Figure 4](#), p. 6) is also used for seals. However, the suitability of this area was considered questionable since activities like beach driving that are involved in seal rehabilitation might disturb the birds' rest. For other parts of the beach, rope barriers were also perceived as inefficient. This was attributed, among other reasons, to the unpredictability of seals' movement, the disturbance likely being more instead of less when constantly adjusting the boundaries to their movements and the challenge it poses to meeting the goal encoded in Green Beach policy to offer beachgoers nature experiences. Accordingly, the other tools assumed necessary to create TRAs were generally perceived as more suitable. Of all these tools, enforcement, education about seals' lives on beaches and communication of interaction rules were considered particularly vital for preventing and addressing disturbances caused by beachgoers. Where enforcement has been addressed by the fourth point of this discussion about strategies, the emphasis on communication and education reinforces the theory adopted from Greif (2006) that organisations shaping an institution are tasked with spreading information that helps people understand what the institution entails.

5.4 Conceptual Model Revised

When integrating the findings from the PD review and interviews into the conceptual model provided in the literature review from Chapter 2 (see Figure 6, p. 16), the takeaway remains that RRP and SL play a central role in comprehending the institutionalisation of coexistence. However, the PD review and interview findings also suggested various refinements. Figure 10 below incorporates these refinements into a new conceptual model. The rest of this section will summarise these refinements, paying special attention to (new) concepts' interrelations.

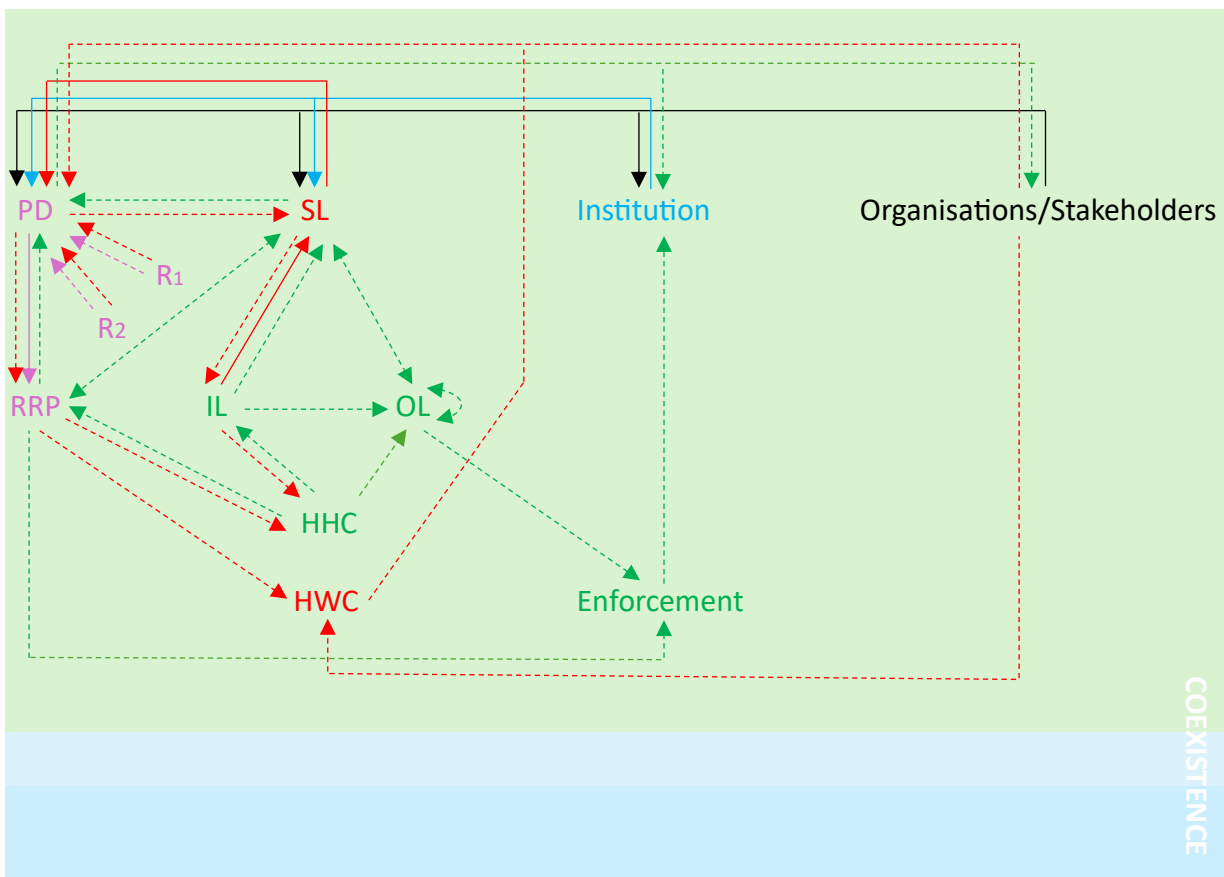


Figure 10. Revised conceptual model

Beginning with RRP, the initial conceptual model (see Figure 6, p. 16) showed that they are formed by a PD, which in turn is shaped by SL, an institution and organisations/stakeholders. The introduction of the purple dotted line arrows in the new conceptual model in Figure 10 further elaborates that besides SL, an institution and organisations/stakeholders, the PD and its resulting RRP can also be shaped by an amalgamation of multiple rules (represented by R₁ and R₂).

Shifting focus from PDs to SL, Figure 10 leaves the theory that SL is shaped by IL and OL as well as an institution and organisations/stakeholders unchanged. Thus, there are also no changes to the red solid line arrows indicating that of the two kinds of SL, IL must always inform a PD.

Furthermore, looking at the red dotted line arrows, one of the biggest refinements displayed in Figure 10's new conceptual model concerns the manifestation of conflicts. These conflicts were initially visualised as a human-wildlife conflict (HWC). However, Figure 10 places human-

human conflict (HHC) in the original spot of HWC and moves HWC below HHC to better illustrate the difference and relationship between conflicts directly involving wildlife versus conflicts where people talk about wildlife.

According to the visualisation in [Figure 10](#) (p. 71) of the manifestation of conflicts, the main difference between an HWC and an HHC is that an HWC can occur without an HHC but that an HHC always results from an HWC. More precisely, the red dotted line arrows indicate an HWC can manifest in two ways. The first one regards the route directly from organisations/stakeholders to HWC, meaning it involves stakeholders who use the same geographical areas as wildlife, whose actions impact or are impacted by wildlife yet who go unmentioned in a PD since their primary activities in these areas are unrelated to wildlife. The second route concerns situations where the stakeholders involve just those encoded in a PD. This means the route starts at organisations/stakeholders and goes via PD and RRP to HWC.

The red dotted line arrow in [Figure 10](#) from HWC to PD tells that an HWC becomes an HHC when it leads to voices of dissent among the stakeholders involved over wildlife. Moreover, the red dotted line arrows in [Figure 10](#) from PD to HHC signal that an HCC can manifest through three routes. The first route is the one from the initial conceptual model. This route runs from PD to HHC through SL and IL and indicates that the dissent stems from the absence of IL in the PD. It also proposes that the dissent may arise from discrepant implications of a PD. The second route is a combination of the first route and the red dotted line arrows from R₁ and R₂ to PD, indicating the dissent is fed by a clash between the mandates of the rules shaping the PD. The third and last route runs from PD to RRP to HHC. It symbolises that HHCs can arise when a PD neglects responsibilities, roles and partnerships related to sharing information about the HWC through the media.

To effectively manage an HHC, similar to the initial conceptual model, [Figure 10's](#) three green dotted line arrows leaving HHC illustrate that RRP, IL and OL should be addressed in the context of the involved PD(s). When these components are only discussed but not included in the PD(s), the green and red (dotted) line arrows show that the dissenting voices become trapped in a vicious circle between HHC, SL and RRP. Besides, in [Figure 10's](#) new model, arrows directly connect SL with RRP and RRP with HHC, providing a clearer picture of the cycle's dynamics.

To move out of the vicious circle, as the above story and the initial model imply, [Figure 10's](#) green dotted line arrows connect SL and RRP with PD. When included in the PD, the green dotted line arrow moving away from PD thus again shows that the institution and organisations/stakeholders will naturally change. This change is due to a PD being shaped by an institution and organisations/stakeholders. Put differently, if a PD changes, an institution and organisations/stakeholders must also change to ensure they can effectively address occurring conflicts.

Moreover, looking at the routes of the green dotted line arrows from HHC to the institution, the biggest changes captured in [Figure 10's](#) new conceptual model relate to the components' interrelations with OL. An overview of these changes:

- The arrow from IL to OL says that IL informs OL. This means two routes link IL and the institution, being (1) IL→SL→PD→institution and (2) IL→OL→SL→PD→institution
- The two-way arrow looking like a half-circle beside OL indicates that, if an institution consists of multiple PDs, the OL of one PD might inform that of the other and vice versa. This implies that the route from OL onwards to an institution would look something along the lines of OL→OL→SL→PD→institution

An overview of these changes (continued):

- The two-way arrows from OL to SL and from SL to RRP indicate that
 - Besides situations when addressing a PD's RRP, the same RRP can surface when addressing its OL. This means the routes from RRP to the institution are (1) RRP→PD→institution and (2) RRP→SL→OL→SL→PD→institution. Regarding route two, it is particularly assumed that it can be combined with the above bullet points on the link between IL and OL and within OL
 - When addressing a PD's OL, different RRP can surface than when its RRP was addressed directly. The possible routes from RRP to the institution then are (1) RRP→PD→institution and (2) OL→SL→RRP→PD→institution. Concerning the second route, it is assumed it can co-occur with the above bullet points about the link between IL and OL, the link within OL, and situations in which similar RRP surfaces when addressing OL and RRP
- The arrow from OL to enforcement introduces enforcement as a new concept. It illustrates that while enforcement may come up when addressing the OL of a PD, OL and enforcement should be seen as two separate things. This is because the literature review in Chapter 2 (see p. 8) emphasised that they are key components of an institution, implying they stand alone yet are interrelated. Moreover, the arrow from RRP to enforcement says that the RRP concerning enforcement has not yet been elaborated in the studied PDs. This means that the new RRP that comes up when addressing a PD's OL will not only provide new input for PDs but also for the meaning of enforcement. Moreover, if the RRP was already known, the arrow from RRP to enforcement would have been purple. Lastly, the arrow from enforcement to institution visualises the theory from Chapter 2 that enforcement shapes an institution

As to coexistence, the light green square in [Figure 10](#) (p. 71) indicates that it continues to be seen as the backdrop against which RRP, PD, rules, SL, an HWC, an HHC, enforcement, an institution, organisations/stakeholders and their interrelationships exist. Furthermore, a blue and blue-grey square has been added to [Figure 10](#) to emphasise that the “shared landscape” part of the definition of coexistence should cover not only the co-presence of humans and wildlife but also the overlaps of stakeholders' geographical working areas within that landscape. These squares also symbolise that the implications of a shared landscape can differ depending on existing local issues, partnerships and actions.

Finally, having outlined the (new) concepts' interrelation and backdrop, a summary of their definitions and the theory that binds them remains. An overview of the definitions and theory:

- **Coexistence:** a dynamic state in which wildlife and humans, including those whose key activities are unrelated to wildlife, co-adapt to being present in a shared landscape (e.g. Green Beaches in this study's context) and where the interactions of humans with that wildlife are managed by institutions that look after long-term wildlife population viability, social legitimacy, HHCs and HWCs. Within this definition, wildlife comprises uncultivated plants and (carcasses of) free-roaming animals. Humans refer to stakeholders
- **Institution:** PD(s), SL, enforcement, organisations and stakeholders collectively
- **Social legitimacy (SL):** input and output legitimacy collectively
- **Input legitimacy (IL):** preferences/perceived importance regarding a PD's core themes

An overview of the definitions and theory (continued):

- **Output legitimacy (OL):** ideal goals for managing human-wildlife interactions, beach management, seal conservation and rehabilitation, and the most efficient strategies/practical solutions for achieving them. While OL recognises that PDs are shaped by goals and strategies/solutions, as opposed to IL, it highlights the need to first explore stakeholders' ideal goals in terms of wildlife/beach management and seal rehabilitation and conservation in general. Afterwards, like IL, OL says that stakeholders' perceptions can be compared with those included in PDs
- **RRP:** responsibilities, roles and partnerships collectively
- **Responsibilities (R):** actions and situations dealt with
- **Roles (R):** general positions in/of an organisation
- **Partnerships (P):** collaborations between two or more stakeholders/organisations
- **Stakeholder:** a group or individual who affects and/or is affected by a policy design
- **Organisation:** a group of stakeholders who work for the same foundation, agency etc.
- **Policy design (PD):** a guideline that defines the RRP an institution encourages. Unlike a rule (see below), a PD does not necessarily have to be legally binding
- **Rules:** laws, acts, conventions, directives and other legally binding agreements. Typically, they are part of a PD. Moreover, because of that, they are used interchangeably with PD in this study
- **Enforcement:** the process of ensuring rules are obeyed
- **Human-human conflict (HHC):** a situation where (1) the absence of IL in a PD gives rise to voices of dissent among stakeholders, (2) a PD's discrepant scientific, legal and practical implications give rise to voices of dissent, (3) the mandates of rules shaping a PD clash and give voices to dissent among stakeholders and (4) the neglect of RRP related to sharing information surrounding the media gives rise to voices of dissent among stakeholders. Where the HHC can comprise one or multiple of these situations, the situations have in common that they are an HWC at their core
- **Human-wildlife conflict (HWC):** a situation where humans' needs and actions impact wildlife or vice versa. Where humans always comprise stakeholders that use the same geographical area as wildlife and whose actions are directly related to wildlife, they oftentimes also comprise stakeholders that use the same geographical area as wildlife yet whose actions are unrelated to wildlife. Furthermore, if dogs are involved, these dynamics between stakeholders and wildlife could also be influenced by the needs and actions of dogs. In such cases, the name of the term human-wildlife conflict expands to include human-wildlife-dog conflicts. Moreover, the main difference between a human-wildlife(-dog) conflict and a human-human conflict is that a human-wildlife(-dog) conflict can occur without a human-human conflict, while a human-human conflict always results from a human-wildlife(-dog) conflict
- **Theory:** HWCs often give rise to HHCs. Resolving such conflicts requires practical solutions (e.g. TRAs) and a dialogue on decision-making processes and responsibilities encoded in PDs on wildlife management. However, to achieve coexistence, it is also crucial that the discussed decision-making processes and responsibilities and the established solutions are socially accepted and followed. The building blocks of this acceptance are enforcement, rules, PDs and the input and output legitimacy and RRP concerning organisations/stakeholders underlying the PDs' designs; the mechanism by which these building blocks are maintained is called an institution

6 Conclusion and Recommendations for Future Research

This study aimed to understand the institutionalisation of human-seal coexistence on Green Beaches, using De Kwade Hoek as a case study. The goal was pursued through a literature review, PD (i.e. Green Beach policy, the SRA and TRAs) review and qualitative analysis of stakeholders' perceptions of the reviewed PDs' social legitimacy surrounding four sub-research questions. In this chapter, answers will be provided to these research questions. Suggestions for future research will also be given. Where the research questions are answered in Section 6.1, the recommendations follow in Section 6.2.

6.1 Answering the Research Questions

Sub-Questions 1-3: What stakeholders, roles, responsibilities and partnerships pertain to seal rehabilitation on Green Beaches?

Prior research has established that key stakeholders, responsibilities, roles and partnerships involved in institutions are usually encoded in PDs. However, in the case of human-seal coexistence at De Kwade Hoek, this study shows that stakeholders' perceptions about their responsibilities, roles and partnerships (RRP) tend to be more detailed than the encoded ones. To fully grasp the institutionalisation of seal rehabilitation on Green Beaches, in De Kwade Hoek's case, this study thus emphasises the importance of addressing not only a PD's encoded RRP but also stakeholders' perceived RRP.

Additionally, prior research has shown that stakeholders and RRP can also be informal. While this was not the primary focus of this study, the PD review and interview findings suggest this might be due to these stakeholders and RRP applying to the same geographical area used for seals yet for reasons unrelated to seals. The sharing of a geographical area implies that it is inevitable that seals and stakeholders impact each other. In De Kwade Hoek's case, this study therefore highlights the importance of including stakeholders' perceptions of both formally and informally involved stakeholders in a PD and their RRP to gain the most complete understanding possible of the institutionalisation of seal rehabilitation on Green Beaches. The section answering the main question will delve deeper into the exact conclusions regarding the relationship between stakeholders, PD and RRP. Conclusions regarding partnerships, follow in this section in any case.

Partnerships are generally regarded as connections between state and non-state stakeholders in institution literature (Ansell & Torfing, 2022; Partelow et al., 2020; Bryson et al., 2006). The same literature also says these connections have in common that they are shaped by outcomes that one stakeholder cannot achieve independently. Moreover, the PD review and interview findings add that these connections can be shaped by overlaps of the geographical areas in which the stakeholders operate. Following the above arguments regarding shared geographical areas, in the case of De Kwade Hoek, this study thus concludes that the institutionalisation of seal rehabilitation on Green Beaches is informed by connections between stakeholders surrounding joint outcomes and geographical work area overlaps.

As to the level of the partnerships, this study prioritised regional ones. The PD review and interview findings added that while seals may indeed be present at De Kwade Hoek, it is crucial to consider that they typically migrate between Denmark, Germany, England, the Netherlands, Belgium and France. This implies that seals may impact or be impacted by not only stakeholders with whom they share De Kwade Hoek but also those beyond. Accordingly, in De Kwade Hoek's case, this study concludes that while regional partnerships are vital, it is

equally important to expand to international partnerships to fully understand the institutionalisation of seal rehabilitation on Green Beaches.

Sub-Question 4: How do the Stakeholders Involved Perceive the Social Legitimacy of Decision-Making Processes for Institutionalising Policies for Seal Rehabilitation on Green Beaches?

The analysis of interpretations of encoded core themes according to stakeholders and their respective PDs shows that stakeholders' interpretations are not always addressed in these PDs. These gaps mainly include things like situations where human intervention in seals' lives is preferred, perceptions of the seal populations' status, human and seal safety, and being in and good to nature. Consequently, this study concludes that seal rehabilitation on Green Beaches is not fully accepted in terms of input legitimacy in De Kwade Hoek's case.

Additionally, the analysis of goals and strategies in the studied PDs' context reveals that the encoded ones are generally reflected in the ones perceived by stakeholders. This especially regards the goals to boost biodiversity and allow the resting of seals on beaches and human experiences of seals' lives on these beaches to go hand in hand. Additionally, stakeholders emphasise the importance of combining these goals with human awareness of seals' needs, thereby adding a new link between the goals and PD rationales. However, given that not every stakeholder favoured admittance to SRCs as an alternative location-related strategy, this study shows that seal rehabilitation on Green Beaches is also not fully accepted in terms of output legitimacy in De Kwade Hoek's case.

Moreover, because of the lack of acceptance of the studied PDs in terms of output legitimacy, this study concludes that the stakeholders involved in seal rehabilitation at De Kwade Hoek are currently in an HHC. Literature on wildlife conservation identifies the sparks of an HHC as an HWC, an absence in PDs of stakeholders' perceptions regarding wildlife management and clashing rule mandates (Fine et al., 2023; Woolaston, 2022; Mekonen, 2020; Cretois et al., 2019). While the sparks of an HHC are not the primary focus of this study, stakeholders' perceptions of the studied PD's social legitimacy also deepen insights into these sparks. Starting with HWCs, the findings' references to beach driving, carcass disposal, dogs and bird nesting areas indicate that HWCs not only involve humans and seals. Instead, they suggest redefining the wildlife part of the term HWCs to include uncultivated plants and (carcasses of) free-roaming animals, and expanding the name of the term to human-wildlife-dog conflicts when dogs are involved.

The second spark or the absence in PDs of stakeholders' perceptions regarding wildlife management is further confirmed by the interview and PD review findings of this study. Concerning the third spark or clashing rule mandates, the interview and PD review findings specify that this typically involves PDs comprising rules that prioritise both wildlife and their habitats and the interests of humans and wildlife. Lastly, the PD review and interview findings suggest two new sparks. These are: (1) discrepancies between a PD's legal, scientific and practical implications and (2) the neglect of RRP surrounding information sharing by the media.

To institutionalise seal rehabilitation on Green Beaches, building on institution and coexistence literature (e.g. Lute et al., 2020; König et al., 2020; Carter and Linnell, 2016; Greif, 2006) and in the case of De Kwade Hoek, this study proposes integrating stakeholders' perceptions of the input and output legitimacy of the PDs it comprises into these PDs. This integration would

further guide decision-making processes on how humans should treat wildlife, ultimately resolving occurring HHCs. Moreover, since HWCs require practical solutions, in cases where the HHC is fuelled by an HWC, this integration offers insights into suitable socially accepted tools.

In this study, to clarify, practical tools were predefined as TRAs. One of the most notable insights of stakeholders regarding tools for setting up TRAs at De Kwade Hoek is the questionability of the assumption that physical (i.e. rope) boundaries are suitable. This is mainly said to be due to the unpredictability of seals' movement, the disturbance likely being more instead of less when constantly adjusting the boundaries to their movements and the challenge it poses to allow the resting of seals on beaches and human experiences of seals' lives on these beaches to go hand in hand. Similarly, the area cordoned off for birds in the nesting season is deemed less suitable for bird-disturbance-related reasons. Accordingly, the other most notable insight of stakeholders into the creation of TRAs at De Kwade Hoek is that they confirm the suitability of the remaining tools assumed necessary. These tools include signage, education, collaboration, communication, research, training, a hotline, relocation, agreements on beach use and enforcement. Moreover, of all these tools, particularly education, communication surrounding seal interaction rules and enforcement were considered vital for handling situations where humans disturb seals.

As the reference to enforcement in the case of De Kwade Hoek as well as prior research on institutions indicates, in addition to social legitimacy, this study proposes that the institutionalisation of human-seal coexistence on Green Beaches is also shaped by enforcement. However, since this study mainly focuses on social legitimacy, the findings about enforcement are just the beginning of a much broader exploration.

Main Question: How do Stakeholders' Perceptions of Social Legitimacy of Seal Rehabilitation Inform the Institutionalisation of Green Beaches?

Stakeholders' perceptions of the social legitimacy of the studied PDs suggest that the institutionalisation of human-seal coexistence on Green Beaches hinges on four components: organisations, rules (e.g. PDs and laws), social legitimacy and enforcement. These components tell how humans are expected to interact with seals and motivate them to meet these expectations. Since there has been little research on the composition and interrelations of these components within the field of coexistence, and to the best of the knowledge of the researcher, none specifically in Green Beaches' context, this study deepens this understanding by offering insights from a social legitimacy perspective for De Kwade Hoek.

Beginning with organisations, this study indicates that they are shaped by stakeholders and shape social legitimacy and PDs. Furthermore, social legitimacy is shown to consist of input and output legitimacy. Collectively, like organisations, they inform PDs. Although PDs are not necessarily legally binding, besides organisations and social legitimacy, they typically appear to be shaped by legally binding agreements like laws and acts. It also seems PDs shape RRP, which in turn shapes enforcement. As to enforcement, this study suggests that it ensures that the social legitimacy encoded in PDs is obeyed by organisations, bringing the components of an institution for human-seal coexistence at De Kwade Hoek around full circle.

Within this circle, this study shows that the exclusion of social legitimacy risks causing an HHC or entrapment of stakeholders' decision-making processes about how humans and seals can share De Kwade Hoek in a vicious circle between RRP and social legitimacy. To escape the vicious circle, this study further shows it is imperative to address the RRP and social

legitimacy and integrate the insights gained into their respective PDs. Moreover, along the path of this integration, new connections with the components of the main circle come to light. These are that input legitimacy informs both PDs and OL; that elements of RRP return in OL and vice versa; that enforcement can result from both RRP and OL; and that the OL of one PD can return in the context of another PD and vice versa.

Given that the components shaping an institution for human-seal coexistence at De Kwade Hoek are interrelated, this study concludes that coexistence can only be achieved when attending to *all* components. If, for some reason, this is not possible, SRCs are deemed more suitable locations for seal rehabilitation.

On the other hand, if attending to all components is possible, this study emphasises employing TRAs as practical solutions to occurring conflicts and tailoring them to existing local issues, partnerships and actions. Moreover, this study advocates factoring in the entities present at De Kwade Hoek beyond humans and seals. Lastly, due to seals' migratory nature, this study encourages looking beyond the studied beach and even beyond The Netherlands.

6.2 Recommendations for Future Research

This study centralised the social legitimacy of institutions for human-seal coexistence on Green Beaches. It particularly emphasised the interpretations of PDs shaping these institutions and the stakeholders that are encoded in them and whose work mainly takes place at De Kwade Hoek. As such, to further contextualise the findings of this study, more research is needed on:

- The perceptions and RRP of informal stakeholders like beachgoers and Rijkswaterstaat
- The dimensions of coexistence that this study omitted (i.e. tolerance, throughput legitimacy and risk)
- Enforcement (i.e. a component of institutions that this study touched at the surface)
- Seal rehabilitation procedures in Belgium, France, the United Kingdom, Germany and Denmark
- Human-seal interactions in their natural setting (i.e. at De Kwade Hoek), particularly
 - Situations in which conflicts occur and the entities involved in these conflicts
 - The role of the media concerning causes and resolutions of conflicts
 - The use of TRAs as a practical solution for occurring conflicts
 - The connection with washed-up litter

These research endeavours align with the potential of a Green Beach like De Kwade Hoek to foster healthy shores, healthy seals and happy societies, as conveyed in the title of this report.

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Appendices

Appendix A. Overview of Interviewees

Table 17. Overview of interviewees

Referral code*	Interview number	Organisation and/or name interviewee	Role and/or work group	Date	Face-to-face or online
I1	1	Stichting ReddingsTeam Zeedieren	Seal guardian	23 September 2022	Face-to-face
I2		Stichting ReddingsTeam Zeedieren	Seal guardian	23 September 2022	Face-to-face
I3	2	Natuurmonumenten	Volunteer coordinator	24 September 2022	Face-to-face
I4	3	Natuur- en Landschapsbescherming Goeree-Overflakkee	- Education Group** - Beach and Sea Group	24 September 2022	Face-to-face
I5		Natuur- en Landschapsbescherming Goeree-Overflakkee	-Education Group** - Beach and Sea Group	24 September 2022	Face-to-face
I6	4	Zuid Hollands Landschap	The Green Beach project manager	26 September 2022	Face-to-face
I7	5	Municipality of Goeree-Overflakkee	Civil engineer supervisor	28 September 2022	Face-to-face
A	6	Ad 't Hart***	-	28 September 2022	Face-to-face
I8	7	A Seal	Veterinarian	30 September 2022	Face-to-face
I9	8	Natuur- en Landschapsbescherming Goeree-Overflakkee Vogelbescherming Stichting Duinbehoud	Former coordinator of the Birds Group**** WetlandWacht Dune consultant	14 October 2022	Online
I10	9	Jarco Havermans from Ecomare	Animal caretaker and marine biologist	24 October 2022	Face-to-face
I11	10	Pieterburen	Head of education	26 October 2022	Face-to-face
T	11	Tineke Schokker	Mediator for SRCs and MMROs who signed the SRA	15 November 2022	Online

* Each interviewee was assigned a unique code. This code was used to refer to them in the interview transcripts and quote them in the Results and Discussion Chapters. An overview of these codes and other contextual details of the interview can be found below.

** Followed a training of The Green Beach, and are born and raised in the area

*** Speaks on behalf of himself. Ad 't Hart helped the Dunes of Oostvoorne, a natural area located on the other side of the Haringvliet Dam as De Kwade Hoek Beach, to become a Green Beach. Furthermore, he fulfils the following roles at the following organisations:

- Guide – IVN Natuureducatie and Zuid Hollands Landschap
- Environmental monitoring (e.g. birds and salt-tolerant plants) – Koninklijke Nederlandse Natuurhistorische Vereniging (KNNV)
- Helps a friend who is a seal guardian at EHBZ. This friend was ill at the time of the interview. For their work, Ad and his friend also come to De Kwade Hoek Beach

**** The Birds Group did not have a coordinator at the time of the interview. Additionally, I9 helped Natuur- en Landschapsbescherming Goeree-Overflakkee to realise The Green Beach project

Appendix B. Interview Guide

This appendix contains an English and Dutch version of the interview guides. Please note that everything highlighted in green was added after the test interview. Moreover, the English version has a simpler layout since all interviews were conducted in Dutch. That was the native language of the respondents and researcher.

Appendix B1. English Version

Date:

Location (face-to-face or online):

Respondents' role:

Introduction

1. Welcome the interviewee
2. Thank the interviewee for taking their time to participate in the interview
3. Introduce yourself (i.e. Anne-Joëlle Derksen, master's student in Tourism, Society and Environment at Wageningen University) and the purpose of the thesis (i.e. to investigate perceptions towards seal rehabilitation on Green Beaches)
 - a. Clarify that The Green Beach is a beach eco-label that runs since 2020 and aims to let nature and nature experiences go hand in hand in the Netherlands
 - b. Clarify that the focus on seals is inspired by the 2020 Seal Rehabilitation Agreement, which states that stranded live seals should be left as much as possible in their natural environment
 - c. Explain that interest in this topic was sparked during an internship at Rugvin Foundation (refer to seal safari)
4. Explain to the interviewee they are going to answer open-ended questions about three themes, being: seal rehabilitation, Green beach use by humans, and temporary resting areas
5. Emphasise you are interested in their perceptions and that all answers are good
6. Indicate the interview is expected to take 45-60 minutes
7. Explain to the interviewee that their identity will largely remain anonymous, but that their role and affiliated organisation will be disclosed in the report for clarity reasons
 - a. Emphasise that they should not suffer reputation damage or personal distress
 - b. Recognise that some topics can be sensitive, and that they may skip a question and withdraw from the study at any time without needing to provide a reason for it
8. Ask the interviewee if everything is clear and if the interview may be recorded [*start recording after permission is given*]

Opening Question

1. Could you talk about your responsibilities as [role]? [*start taking notes*]
 - a. Relation to seal rehabilitation and/or beach management
 - b. Collaboration with other organisations
 - i. Role within these collaborations

Questions about Seal Rehabilitation

1. What is your perception towards [prompt]? Why is this important to you?
 - a. Needs of stranded seals
 - i. Trapped and injured seals
 - ii. Suckling pups without mother nearby
 - iii. Weaned seals
 - iv. Mildly ill seals
 - v. Seriously ill seals
 - b. Seals receiving help from humans
 - c. Minimising unnecessary suffering
 - d. Seal conservation
2. What strategies do you consider appropriate for seal rehabilitation? Could you further describe what you mean by [strategy]?
 - a. Preference for rehabilitation in a centre or their natural environment
 - b. What goals would you ideally like to achieve in terms of seal rehabilitation and conservation
 - c. What do you consider the most efficient strategy(s) to achieve the goal(s)

Questions about Green Beaches

1. What is your perception towards [prompt]? Why is this important to you?
 - a. Needs of people visiting a Green Beach (e.g. kinds of recreational activities)
 - b. Simultaneous use of beaches by humans and stranded seals
2. What strategies you consider appropriate for seal rehabilitation? Could you further describe what you mean by [strategy]?
 - a. What goals would you ideally like to achieve in terms of enhancing human-seal interactions and beach management
 - b. What do you consider the most efficient strategy(s) to achieve the goal(s)
 - c. Most efficient strategy for handling situations where bystanders disturb the animals or threaten with violence

Questions about Temporary Resting Areas

Clarify that temporary resting areas are an idea mentioned by the Scientific Advisory Committee on Seal Rehabilitation in the Netherlands (WAZ) in their report published in 2018 and that the Seal Rehabilitation Agreement is based on their advice. Explain as well that WAZ thus refers to setting up temporary resting areas on beaches.

1. What is your perception towards temporary resting areas for seals on Green Beaches? Could you please describe this in more detail?
 - a. Needs of people you consider most important in this case
 - b. Needs of seals you consider most important in this case
2. What do you consider the most efficient strategy to set up temporary resting areas?
 - a. Most important equipment needed (e.g. ribbons, poles and information signs)
 - b. Most efficient strategy for handling situations where bystanders disturb the animals or threaten with violence
 - c. What do you think would be your role in this

Closing Questions

1. Is there anything else you wish to say?
2. Are there other people you recommend interviewing or organisations you recommend approaching? [*end recording and stop taking notes*]

Conclusion

1. Explain to the interviewee that they can change their mind about the information they shared and researcher may use for the research until October, which is when the data analysis commences
2. Thank the interviewee for meeting and offer a digital copy of the thesis and the opportunity to participate in the colloquium and/or a presentation session at Natuurmonumenten's office in Goedereede as a token of appreciation
 - a. Would the interviewee like to receive a digital copy: yes/no
 - b. Comment:

Appendix B2. Dutch Version

Datum:

Locatie (face-to-face of online):

Rol geïnterviewde:

Introductie

1. Welkom de geïnterviewde
2. Bedank de geïnterviewde voor het nemen van hun tijd om aan dit onderzoek deel te nemen
3. Stel jezelf voor (d.w.z. Anne-Joëlle Derksen, masterstudente Tourism, Society and Environment aan de Wageningen Universiteit) en het doel van de scriptie (d.w.z. onderzoeken welke zienswijzen ten grondslag liggen aan zeehondenrehabilitatie op Groene Stranden)
 - a. Licht toe dat Het Groene Strand een ecolabel is dat bestaat sinds 2020 en als doel heeft om natuur en natuurbeleving op stranden hand in hand te laten gaan
 - b. Leg uit dat de focus op zeehonden is geïnspireerd op het Zeehondenakkoord uit 2020, waarin staat dat gestrande levende zeehonden zoveel mogelijk in hun natuurlijke omgeving moeten worden gelaten om te herstellen
 - c. Leg uit dat de interesse in dit onderwerp is ontstaan tijdens een stage bij Stichting Rugvin (verwijs naar zeehondensafari)
4. Vertel de geïnterviewde dat ze open vragen gaan beantwoorden over drie thema's, namelijk: zeehondenrehabilitatie, het gebruik van Groene Stranden door mensen, en tijdelijke rustgebieden
5. Benadruk dat je geïnteresseerd bent in hun zienswijzen en dat alle antwoorden goed zijn
6. Geef aan dat het interview naar verwachting 45-60 minuten zal duren
7. Leg aan de geïnterviewde uit dat hun identiteit grotendeels anoniem zal blijven, maar dat om verduidelijkingsredenen hun rol en de organisatie waar ze bij aangesloten zijn in het rapport zal worden vermeld
 - a. Benadruk dat ze geen reputatieschade moeten oplopen en het interview hun geen leed moet aandoen
 - b. Erken dat sommige onderwerpen gevoelig kunnen zijn, en dat ze een vraag kunnen overslaan en zich op elk moment kunnen terugtrekken uit het interview zonder hier een reden voor hoeven te noemen
8. Vraag de geïnterviewde of alles duidelijk is en het interview mag worden opgenomen [*start met opnemen van het interview nadat hier toestemming voor is gegeven*]

Openingsvraag

1. Kunt u iets vertellen over uw verantwoordelijkheid als [rol]? [*begin met het maken van aantekeningen*]

(a) Relatie met zeehondenrehabilitatie en/of strandbeheer:

(b) Samenwerking met andere organisaties:

Rol binnen deze samenwerking:

Vragen over Zeehondenrehabilitatie (1/2)

1. Wat is uw zienswijze op [prompt]? Waarom is dit belangrijk voor u?

(a) behoeften van gestrande zeehonden in verschillende situaties:

- verstrikte en gewonde zeehonden:

- zogende zeehonden zonder een moeder in de buurt:

- gespeende zeehonden:

- matig zieke zeehonden

- ernstig zieke zeehonden:

(b) menselijk ingrijpen bij zeehondenrehabilitatie:

(c) het minimaliseren van onnodig lijden:

(d) behoud van zeehonden:

Vragen over Zeehondenrehabilitatie (2/2)

2. Welke strategieën zijn volgens u geschikt voor de rehabilitatie van zeehonden? Kunt u nader omschrijven wat u bedoelt met [strategie]?

(a) voorkeur voor rehabilitatie in een zeehondenopvangcentrum of in hun natuurlijke omgeving:

(b) welke doelen wilt u idealiter bereiken op het gebied van rehabilitatie- en behoud van zeehonden:

(c) wat is volgens u de meest doeltreffende strategie(n) voor het bereiken van deze doelstelling(en):

Vragen over het Groene Strand (1/2)

1. Wat is uw zienswijze op [prompt]? Waarom is dit belangrijk voor u?

(a) behoeften van mensen die een Groen Strand bezoeken (bijvoorbeeld welke soorten recreatieve activiteiten):

(b) gelijktijdig gebruik van stranden door mensen en gestrande zeehonden:

Vragen over het Groene Strand (2/2)

2. Welke strategieën zijn volgens u geschikt voor de rehabilitatie van zeehonden op Groene Stranden? Kunt u nader omschrijven wat u hiermee bedoelt?

(a) welke doelen wilt u idealiter bereiken met betrekking tot het bevorderen van mens-zeehond interacties, en strandbeheer:

(b) wat is volgens u de meest doeltreffende strategie(n) voor het bereiken van deze doelstelling(en):

(c) meest efficiënte strategie voor situaties waarin omstanders de dieren verstoren of dreigen met geweld:

Vragen over Tijdelijke Rustgebieden (1/2)

Licht toe dat tijdelijke rustgebieden een idee is dat de Wetenschappelijke Adviescommissie Zeehondenopvang (WAZ) noemt in haar rapport uit 2018, en het zeehondenakkoord op dit advies is gebaseerd. WAZ spreekt dus over het inrichten van tijdelijke rustgebieden op stranden.

1. Wat is uw zienswijze op tijdelijke rustgebieden voor zeehonden op Groene Stranden? Kunt u dit nader toelichten?

(a) behoeften van mensen die volgens u in dit geval het belangrijkste zijn:

(b) behoeften van zeehonden die volgens u in dit geval het belangrijkste zijn:

Vragen over Tijdelijke Rustgebieden (2/2)

2. Wat is volgens u de meest efficiënte manier om tijdelijke rustgebieden in te stellen?

(a) benodigd materiaal (zoals linten, palen en informatieborden):

(b) meest efficiënte strategie voor situaties waarin omstanders de dieren verstoren of dreigen met geweld:

(c) wat zou volgens u uw rol hierin zijn:

Slotvragen

1. Is er nog iets anders dat u wilt zeggen?

2. Zijn er andere mensen die u aanbeveelt om te interviewen of organisaties die u aanraadt om te benaderen? [*stop met het opnemen van het interview en schrijven van aantekeningen*]

(a) contactgegevens:

(b) kan ik uw naam noemen als ik contact met ze zoek?

Afsluiting

1. Leg aan de geïnterviewde uit dat ze van gedachten kunnen veranderen over de informatie die ze hebben gedeeld en de onderzoeker mag gebruiken voor de scriptie tot oktober, het moment waarop de data-analyse begint
 - a. Benadruk dat ze op elk moment een digitale kopie van het transcript kunnen opvragen
2. Bedank de geïnterviewde voor hun deelname en bied een digitale kopie van de scriptie aan en mogelijkheid om deel te nemen aan het colloquium en/of presentatieavond op het kantoor van Natuurmonumenten in Goedereede als blijk van waardering

Wil de geïnterviewde een digitale kopie ontvangen:

Ja / nee

Opmerking/toevoeging:

Appendix C. Code Tree

Please find below an overview of the axial and selective codes derived per interview section.

Table 18. Codes assigned to text fragments discussing the SRA

Interview Question	Axial Code	Selective Code
1a.a) Perceptions towards trapped & injured seals' needs	When directly attributed to human action	Helping when due to human action
	When hit by a propellor or something similar	
	When having a human-induced cause	
	This is due to human actions	
	You do not want to let them suffer unnecessarily	Helping because they are in distress
	The animal needs help	
	You do not leave seals on the beach to die	
	Never seen at De Kwade Hoek	Never seen at De Kwade Hoek
	Wrong picture shared in Dutch media of stranded seals	Wrong upbringing
	Wrong picture shared in Dutch media of relation between fishery and harbour porpoises	
They are not endangered; a weak seal can bring back diseases	Letting them die	
1a.b) Perceptions towards needs of suckling pups without a mother nearby	The protocol is clear	What the SRA mentions
	Observing	Observing for 24 hours & weighing to see if they gained weight
	Observing & weighing to see if they gained weight	
	Do not take to an SRC: see if the pup will make it, extend the observation period	
	Keep in the same area, weighing when found and after 24 hours, check the umbilical cord to estimate if it is suckling or weaned	
	Observe orphans for 12 hours or take them directly to an SRC	Observing for 12 hours or directly to an SRC
	Observe the seal and place information signs next to it	Informing the public on how to handle seals
	A part of the beach where it is quiet for moulting seals	Rest: humans and dogs keep distance from the pup
	A person stays non-stop near the seal until it is ensured that people and dogs keep their distance	
	Research about Dollard estuary shows prohibiting access to people and dogs prevents many problems	
	It is the question if the mum can find it if you move it	Staying on same beach so mum can find it
	Do not move, otherwise its mum cannot find it	
	When moving 25km the mum will not know the young went somewhere else and loose contact	
	What the SRA mentions	What the SRA mentions
	Letting natural processes take their course	Letting natural processes take their course
	Letting natural processes take its course without disturbing them unless dead and stinky: then move to a spot where it can be given back to nature or burry it	
	Leaving them alone as much as possible	
You do not have them here	Absent in the south of the Netherlands	
Dollard estuary is most known place where pups are born and raised		

1a.c) Perceptions towards weaned seals' needs	Only help those in a bad condition	Rehabilitating in SRC when in bad condition
	Ultimately, SRCs decide those in a bad condition will be handled	
	When suffering seriously	
	Marking	Marking and observing
	Marking and observing	
	When having a human-induced cause	Helping when due to human action and suffering
	Humans and dogs stay away; act when still there next day	Rest: in an area prohibiting access to people & dogs, and acting when still there the next day
	Research about Dollard estuary shows prohibiting access to people and dogs prevents many problems	
	Seals have to learn how to find their own way	Letting natural processes take their course
	Letting natural processes take its course without disturbing them unless dead and stinky: then move to a spot where it can be given back to nature or burry it	
	Letting natural processes take their course & not move to another beach	
	What the SRA mentions	What the SRA mentions
	Not every seal cries for help, it is a normal sound they make	Howler is wrong term
1a.d) Perceptions towards mildly ill seals' needs	It is the question what mildly means	Estimating if mildly/seriously ill is difficult
	Adrenaline makes those that are seriously ill look mildly ill	
	The difference between mild and seriously ill needs further specification	
	Because it is hard to estimate if they are mildly or seriously ill	Observing for 12 hours
	Leaving where found under observation or move to a quieter spot	Leaving on the beach for observation or moving to a quiet spot
	Being left alone where found	
	Not moving from another beach to De Kwade Hoek to prevent seals there get ill too	Not moving from another beach to De Kwade Hoek to prevent seals there get ill too
	Help when illness is directly attributed to human action	Helping when due to human action
	Helping when having a human-induced cause	
	You do not want to let them suffer unnecessarily	Helping when suffering
	Take to an SRC when symptoms cannot be established on the spot	Helping those with unknown symptoms in an SRC
	Rarely happens that you do not know what is wrong	
	What the SRA mentions	What the SRA mentions
	Do nothing: leave in nature	Letting natural processes take their course
	Letting natural processes take their course unless dead and stinky: then move to a spot where it can be given back to nature or burry it	
Wild seals have the right to die when ill due to natural processes		
1a.e) Perceptions towards seriously ill seals' needs	Direct admittance to an SRC	Direct admittance to an SRC
	Especially those carrying a zoonosis	
	Healthy seals move away from humans instantly	Estimating if mildly/seriously ill is difficult
	Mildly ill seals move away from humans, but also return to the finding spot	

	Very seriously ill ones do not move	
	Admittance when so ill it is clear they will not make it	Observing for 48 hours at the SRC & euthanising when it becomes clear the seal will not make it
	Observe at SRC to see if its conditions improve: remains difficult to estimate if they will make it	
	Helping when having a human-induced cause	Helping when due to human action
	See same code in interview question on mildly ill seals	Helping those with unknown symptoms in an SRC
	What the SRA mentions	What the SRA mentions
	Do nothing: leave in nature	Letting natural processes take their course & not move to another beach
	Letting natural processes take their course & not move to another beach	
	Letting natural processes take their course unless dead and stinky: then move to a spot where it can be given back to nature or bury it	
1b) Perceptions towards seals receiving help from humans	You have 2 options. Option 1 is treatment at an SRC	Do not leave seals on a beach to die
	Option 2 is euthanasia	
	Only helping seals if they pose a risk to animal and human health, or if they are wounded	Only helping seals if they pose a risk to animal and human health, or if they are wounded
	“Stranded” sounds like the animal is in need, but not all need help; some just want to rest	Not every seal lying on the beach needs help. Some just want to rest
	Seals must be able to fend for themselves & need a quiet beach	
	Seals need a quiet beach where currents pass & it becomes deep quickly so they can swim away fast	
	Sometimes rest suffices for a seal to feel healthy and swim away	
	Seals need room to rest	
	The public has a lack of knowledge yet good intentions	People need to learn SRCs have the final responsibility for seal rehabilitation, seals are predators and what they can(not) do with seals
	We grew up with the idea seals are cute, but they are predators	
	You do not want to let them suffer unnecessarily	You must help seals that are suffering
	Keeping an eye on young seals & letting nature take its course for sick seals letting	Keeping an eye on young seals & letting nature take its course for sick seals letting
	Helping when sick/injured due to human action	Only helping seals if they got sick/injured due to human action is the essence. But this is hard to estimate as their history is unknown
In practice hard to estimate when something is human-induced as you do not know the seals’ history		
Seals are indicators of the sea: if sick due to our actions we must take responsibility and help them & facilitate their natural dynamics		
1c) Perceptions towards minimising suffering	To end their suffering	Euthanising the seal
	Euthanising them provided the veterinarian determines this	
	For those that will not make it	
	For those with a genetic disorder	
	Letting a veterinarian examine it	Letting a veterinarian examine the seal ASAP
	Veterinarians are the only ones who have the right	

	knowledge on minimising suffering & are authorised to euthanise seals	Letting a veterinarian examine the seal ASAP
	Helping the seal when clear it will survive	Treating the seal at the SRC if the veterinarian estimates it will save the seal's life
	Examination in an SRC	Intervening when the seal poses a threat to human health
	Intervening when the seal poses a threat to human health	Intervening when the seal poses a threat to human health
	There are plenty of seals at De Kwade Hoek	Letting nature take its course
	People need to learn/accept that life and death are part of nature	
	The starting point is to avoid seals getting in trouble due to human action and offering seals a life with as many natural processes as possible	
	It is the question what suffering is and if humans should intervene	It is the (ethical) question of what suffering entails, if seals are suffering, and if humans should intervene with "suffering" seals
	It is an ethical question: everyone thinks about it differently	
	It is debatable whether seals suffer	
	Sometimes the same words are used in relation to suffering, but there are other intentions behind those words	
1d) Perceptions towards seal conservation	There are enough seals so the time of patching them up is over	The population at De Kwade Hoek/in the Netherlands has recovered and is large. So, with few exceptions, protection is unneeded
	The populations in the wild are faring well, so only help when human-seal conflicts arise	
	There are enough seals, so they do not need protection	
	The population is healthy, only where needed try to ensure it stays this way	
	There are more seals than there is food: the system cannot handle this	
	First you must know where and how many seals are	First, a solid record of seal numbers is important
2a) Preference for rehabilitation in an SRC or on the beach	Seals belong in the sea	Natural environment
	Seals are best off in the wild	
	Natural environment	
	Green Beaches encourage this	
	This requires regulation on a European level	
	For seriously ill seals	SRC
	SRCs must mainly educate people about seals	
	SRCs must be able to help distressed seals	
2b) Ideal goals in terms of seal rehabilitation and conservation	Not leaving seals on the beach to die	Not leaving seals on the beach to die
	Visitors show respect to the inhabitants of De Kwade Hoek, including seals	People know that seals are part of nature and how to handle them when encountering one
	Every SRC visitor understand the effects of humans on the living environment of animals that live on beaches	
	People let seals rest as much as possible in their natural habitats	
	People know what to do when encountering a seal on the beach	
	Accepting seal numbers fluctuate & carefully think why it happens	

	See selective code	Humans only help seals that pose a threat to animal and human health, and seals that are wounded
	Seals should be able to rest undisturbed	Letting nature take its course
	Seals that strand are not taken away directly by an animal ambulance	
	Seals are not moved unless dead and stinky: then moving is understandable from a recreation viewpoint	
	There are enough seals so the time of patching them up is over	Seals rest in their natural environment as much as possible
	See selective code	Accepting seal numbers fluctuate & carefully think why it happens
	See selective code	Doing your job the best as possible, and learning from the seals when they are at the SRC
	Humans should be more conscious about the effects of recreation and consumption activities on nature & animal welfare	Letting nature take its course, also when seals are sick/injured
	Usually, stakeholders tell me things the SRA mentions	It is hard to find out stakeholders' values
2c) Most efficient strategy(s) to achieve these goals	Registering stranded seal numbers	Research
	Documenting treatments as well as possible	
	Using seals as key players to show SRC visitors the influence we humans exert on seals' living environment	Education
	Telling beachgoers about seals using means like information carts and signs, brochures, and social media	
	Placing signs about seals at beach entrances	
	Teaching people SRCs have the final responsibility for seal rehabilitation	
	Teaching people seals are predators	
	Teaching beachgoers how (not) to handle seals	
	Beachgoers use binoculars to view seals from a distance	Zoning
	Making clear beach driving rules, especially for the bird nesting season	
	Putting fences around areas where young seals rest	
	Only allowing people to walk at De Kwade Hoek	
	Creating resting areas at De Kwade Hoek for seals that need observation	
	Ensure that both people and dogs keep their distance from seals	Enforcement
	Treating seals brought to the SRC as well as possible and chipping them	Procedure
Not helping seals that are sick		
Following the basic principle that seals should not be moved to other beaches and rest on a quiet beach		
Giving back to nature by disturbing it less and being more conscious about our recreation and consumption activities as well as animal welfare		
Question that emerged during	Is better for orphaned seals and seal of which it is unsure if they are mildly/seriously ill	12-hour observation period

interview: amendments that should be made to the SRA	In situations where quick decisions need making to guarantee the seals' and/or bystanders' safety	Seal guardians may act alone
	Under the guise of disruption, in theory any seal can still be taken to an SRC	Creating more clinical indicators for admission to an SRC
	For weaned seals/suckling pups	
	For suffering	
	Especially concerning the role of adrenaline for recognising mildly/seriously ill seals	Further defining when seals are mildly/seriously ill based on clinical indicators
See selective code	Looking more at the situation in SRCs: what they can offer seals and when they can take in seals, especially when it is unclear if they are mildly/seriously ill	
See selective code	Explaining what happens in practice when seals are admitted to an SRC or left in their natural environment	

Table 19. Codes assigned to text fragments discussing Green Beaches

Interview Question	Axial Code	Selective Code
1a) Beachgoers' needs	Rest	Resting in nature/by the sea with the feeling of being in nature
	Rest in nature	
	De Kwade Hoek is consciously a quiet beach	
	Rest at sea or with the feeling of being in nature	
	Nature	Nature to visit/wandering on the beach without being restricted to going somewhere
	Visiting a nature beach	
	Beach access	
	Involving people in Green Beaches: both those who know and do not know about it	Being informed what Green Beaches are
	Beachgoers know what a Green Beach is	
	People know what ebb and flow is	Knowledge about ebb and flow
	See selective code	Safety of humans and seals
See selective code	Being good to nature	
It is the question if people consciously visit a Green Beach	Hard to say	
Every recreationist has its own needs		
1b) Simultaneous beach use by seals and humans	People instantly panic when encountering a seal	People need to learn that seals also use a beach, and how to (recognise) report(ed) seals
	Learn to live with nature	
	People need to know how to (recognise) a report(ed) seal	
	Seals and free-walking dogs do not mix well: dogs disrupt their rest	Can go well when people, dogs and vehicles keep their distance from seals, but will be difficult to achieve in practice
	People need to keep their distance: otherwise, seals get stressed or think they have food	
	Possible provided seals are left undisturbed	
	It is a choice between 2 evils: you ensure they can rest in a quiet place, but relocation would make them stressed, and visitors and dogs are very disruptive too	
	Difficult in practice: sometimes multiple people drive for the same seal	
	There are 2 options. Option 1: can go well if Green Beaches prioritise natural processes/emphasise natural processes are more important than beachgoers' needs	Can happen if there are areas where beachgoers are not allowed to come
	Option 2: you say the beach mainly targets people and you give as much space to natural processes as possible; it also depends on individual seals if they stay put	Can go well when fostering natural processes
	2a.a) Ideal beach management goals	Observation as default procedure for seal rehabilitation
Bringing seals to De Kwade Hoek when they cannot rest undisturb-ed on the beach they are found		
Less cars on the beach, and when they do they follow one path near the high-tide line Driving and resting are a bit in each other's way		Maintaining the right balance between driving on the beach as little as possible and observing seals on the beach/ensuring the seals that are observed can rest

	You should be able to drive on the beach, but that is not necessary every hour: drive cautiously	Fewer vehicles driving on the beach: arrange better that they keep one fixed track (preferably near the high-water line) and for what reasons they can drive on the beach	
	Many different parties hold a permit for beach driving		
	A lot of beach driving is annoying for beachgoers and compromises their safety		
	Protect nature	Letting nature take its course at more parts of the beach while being realistic it serves economic interests too (i.e. to make money via tourism)	
	More room for natural processes		
	Give nature room while also being realistic that the beach serves economic interests too (i.e. to make money via tourism)		
2a.a) Ideal goals in terms of enhancing human-wildlife interactions	Distance is kept from seals	Beachgoers keep their dogs on a lead and 30m (or what I9 calls "binocular distance") from seals because they understand the needs of seals. When this is the case, seals can rest in their natural environment and stay on the beach where they are found, also if it is a crowded beach	
	Beachgoers consciously keep their distance from seals because they know seals need room to rest		
	People and seals use the beach next to each other (each has a part to themselves)		
	Keeping distance because animals that feel ill are less likely to flee, but that does not mean they like people coming near		
	People leave seals alone/show respect based on an understanding of seals' needs, and call when something is wrong		
	See selective code	Beachgoers dare to hear the answer no and let seals be	
	Seals can transit diseases that make humans and dogs sick	Safety	
	Emphasising the bigger picture and natural processes	Getting rid of human-seal encounters as there is much more to see on the beach	
2b.a) Most efficient strategy(s) to achieve beach management goals	Treating seals in an SRC if they need medical help because there is the right equipment and medication, and it will reduce unnecessary driving on the beach. A mobile seal rehabilitation unit would not work as the coastline is long, and strandings happen too little	Procedure	
	When a stranded seal is found on a beach near De Kwade Hoek and rest cannot be ensured, then the seal could be moved to and observed at De Kwade Hoek since it is a secluded beach		
	Observing seals from a distance using binoculars or technical resources like a drone when possible (e.g. moulting pups or if they bleed a little) so cars can drive less far on the beach		
	Cars are following one fixed path as much as possible		
	Parking the car at a certain distance from the seal and walking the last part to prevent they are disturbed by the sound and start moving (though, grey seals pups are known to sleep soundly; they often do not wake up)		

	Approaching the seal at least once every 24 hours to check how they are doing (e.g. you cannot tell well from a distance if something has changed in terms of blood loss)	Procedure
	Cordoning off the beach so that vehicles must follow one fixed path	Zoning
	A fixed path could be created by placing yellow-headed posts at the high-tide line	
	Checking if people follow the rules	Enforcement
	Showing that nature and nature experiences can go hand in hand with the help of the beach community (e.g. they help to keep the beach clean)	Collaboration
	Natuurmonumenten works together with the municipality of Goeree-Overflakkee	
	Discussing alternative solutions to burying non-biological trash in the dunes	
	Making people aware that they should take their trash home and	Education
	Making people aware where they can find bins, while being honest	
	Making people aware about the impact of our consumption activities on the economy	
	Make people aware how management of the beach is financed	
2b.b) Most efficient strategy(s) to achieve goals for enhancing human-wildlife interactions	Signs at beach entrances explaining seals can rest on the beach, what grey and harbour seals are, 30m distance must be kept, dogs put on a lead, and how (recognise) report(ed) seals	Signage
	Signs at the high-water line using the yellow sign from the website about the SRA/on the beach showing what people must do when encountering a seal and featuring a pictogram of a seal and QR-code to the website about the SRA	
	Writing dogs must be kept on a lead in bigger letters on the signs that are already placed at De Kwade Hoek	
	Signs near the stranded seal telling the animal is in observation and distance must be kept	
	Rule enforcement by Special Investigating Officers (BOAs) and a volunteer surveillance team to make sure beachgoers follow the rules explained on information signs, especially the rule to keep dogs on leads	Enforcement
	By the above team on WhatsApp for extra pair of eyes	
	Seal guardians draw on the knowledge from their training to tell beachgoers the stranded seal they are handling stays on the beach	Education
	The beach community tells beachgoers stories about life on Green Beaches and what rules they must obey	

	<p>Training dog owners to keep dogs on a lead when they see wildlife</p> <p>When there are many bystanders, seal guardians explain that distance must be kept or that they take the seals with them for safety reasons</p> <p>The beach community tells beachgoers stories on what they can see and do at the beach</p>	Education
	<p>Creating resting areas for seals (i.e. where beachgoers cannot come) with Green Beaches on its edges and behind that normal beaches</p> <p>Creating a rest radius of 30m around a seal or alternatively 10m when there are multiple seals on Green Beaches</p> <p>Keeping the parts of De Kwade Hoek Beach that are already closed to people closed</p>	Zoning
2c) Most efficient strategy to handle people who cause a disturbance	<p>Transporting the seal in a box by car to another beach where they will not be disturbed</p> <p>Weaned pups and adults can be transported to another beach</p> <p>Seal guardians can act alone (i.e. put the seal in the car and drive to another beach) when quick decisions need making to guarantee the seals' and/or bystanders' safety</p> <p>Transporting the seal to an SRC as soon as possible when it is clear it needs help</p>	Procedure
	<p>Seal guardian stays calm</p> <p>Seal guardian calmly inform bystanders why they must keep distance</p> <p>Seal guardians calmly inform bystanders what they are doing with the seal & about seal rehabilitation</p> <p>Seal guardians learn how to inform bystanders during their training</p> <p>Using sings to explain seals are being observed and distance must be kept</p>	Education
	<p>BOAs (the volunteer surveillance team's leader) have the authority to deal with people who disobey the rules</p> <p>The police is authorised to deal with people who disobey the rules</p>	Enforcement
	<p>Calling the police (who knows which BOA is on duty)</p> <p>Calling a BOA (who Natuurmonumenten hires)</p> <p>Members from the beach community and volunteer surveillance teams ask people to follow the rules, especially about distance and keeping dogs on leads</p>	Communication/Phone Number

Table 20. Codes assigned to text fragments discussing temporary resting areas

Interview Question	Axial Code	Selective Code
1a) Beachgoers' paramount needs	See selective code	Resting in nature
	See selective code	Clear signage
	See selective code	A long walk on the beach
	See selective code	Seeing a Green beach, so not a seal in particular
	Giving nature and animals room to do their thing	Giving nature an animals room to do their thing
	Giving things in nature room to grow	
	See selective code	Human and seal safety/keeping distance from seals
	Recreation near the sea with the feeling of being in nature	Recreation with the feeling of being in nature
	Recreation on a Green Beach	
	See selective code	Involvement: beach access and a chance to experience an adventure
	Education on things to see	Education about what they can see and do
	Education on things to do	
	1b) Seals' paramount needs	Rest without being disturbed by humans and dogs
Resting on sandbanks off the coast		
Rest for all animals that live on a beach		
See selective code		A piece of land to rest, feed pups, and for Vitamin D production in their skin
Ill seals want to rest because they feel miserable & healthy seals want to lie on land to rest		Rest (i.e. not being chased into the water)
A stream that is a bit deep		Waterway
A waterway to swim away fast if they want to		
Room for animals, plants and people to roam and rest		Rest and room in the broadest sense of the word
2a) Most important equipment needed	See explanation column in Table 15 (p. 57)	Consideration
	See explanation column in Table 15 (p. 57)	Zoning
	See explanation column in Table 15 (p. 57)	Collaboration
	See explanation column in Table 15 (p. 57)	Education
	See explanation column in Table 15 (p. 57)	Signage
	See explanation column in Table 15 (p. 57)	Communication
	See explanation column in Table 15 (p. 57)	Enforcement
2b) Most efficient strategy to handle people who cause a disturbance	See same interview question in section on TGB	See same interview question in section on TGB

2c) Role in creating TRAs	Seal guardians educate beach goers while providing assistance to stranded seals	Education
	All staff from Natuurmonumenten asks people they encounter on the beach to put their dogs on a lead	
	Telling stories about life on Green Beaches	
	SRCs tell stories about seals and seal rehabilitation, and works on related informative things	
	SRCs establish which information will be shared with beachgoers	
	Seal guardians help stranded seals on beaches for which they have a permit	Assisting stranded seals
	Seal guardians can help stranded seals on beaches closed to the public if they get a permit	
	Seal guardians can conduct tests with the seals on beaches (e.g. weighing them) and observe them	
	Granting permits or making adjustments to existing ones	Zoning
	Making agreements on the beach's design	
Giving advice on the possible closure of De Kwade Hoek's tip		
Enlisting volunteers to sit next a seal and inform them not to disturb them	Communication	
Explaining what the SRA is about and how to implement it		
See selective code	Processing project applications	
See selective code	Letting seals do their thing and cleaning-up non-natural materials once a year	

Table 21. Codes assigned to text fragments discussing the closing question

Interview Question	Axial Code	Selective Code
Other people or organisations recommended to approach	References were made to stakeholders that had been approached already	
Other things wished to say	See selective codes	A seal requires a place where we can lay animals; De Kwade Hoek could be suitable for this

Table 22. Codes assigned to text fragments discussing the opening questions

Interview Question	Axial Code	Selective Code
1a) Responsibilities as [role] in relation to seal rehabilitation	Eyes & ears of the SRC: taking photos and videos, sending them to the SRC (which decides if the seal will be put under observation)	Observing seals
	Driving when seals are reported	
	Marking stranded seals with a biodegradable spray	Marking seals
	Duty to report seals to SRC	Information/communication/education
	Reporting stranded seals to an SRC & forwarding beachgoers to SRCs	
	Telling stories about seals during excursions & using an information cart	
	Teaching SRC visitors about seals	
	Driving stranded seals to the SRC	Transporting/disposing seals
	Duty to dispose of carcasses	
	Judging if seals should (not) be taken to an SRC based on the footage from the seal guardians	Treating seals
	A Seal is financially independent	
	Carrying out treatments and therapies	
	Facilitating funds and giving training to communities to create Green Beaches	Coordination/facilitation/mediation
	Facilitating mediation; facilitating the evaluation on whether the implementation of the SRA goes well in practice	
Bring the parties involved in seal rehabilitation together and draft the SRA using WAZ's report		
See selective code	Cordoning off an area	
Recording the treatments seals received	Administration	
Providing seal guardians permits to rehabilitate seals at De Kwade Hoek		
1b) Responsibilities as [role] in relation to beach management	Managing the beach	Coordination/facilitation/mediation
	Coordinating the implementation of Green Beaches	
	Creating Green Beaches	
	Telling stories about life on Green Beaches through excursions & an information cart	Information/communication/education
Training volunteers how to tell stories about life on Green Beaches		
2a) Partnerships	See selective codes	Mediator and all SRCs & MMROs
		NLGO & GO Goeree-Overflakkee
		DierenLot, RTZ & mediator
		Volunteers NLGO & Green Beaches Beach community: NLGO, Natuurmonumenten & the municipality of Goeree-Overflakkee

			Volunteers of NLGO, Natuurmonumenten & the municipality of Goeree-Overflakkee
			Beach manager (Natuurmonumenten) with NLGO, EHBZ, A Seal, and the municipality of Goeree-Overflakkee
			SRCs & seal guardians among each other
			EHBZ with Natuurmonumenten, Pieterburen, Ecomare, mediator and the municipality of Goeree-Overflakkee
2b)	Role partnership	withing	Carrying out the 24-hour observation rule Leaving seals where they are or move them Looking at the seal to advise how it should be handled
			Observing seals
			See same code at question 1a
			Marking seals
			Advising SRCs how to handle a stranded seal
			Information/communication/education
			Giving excursions
			Advertising excursions
			Reporting stranded seals to an SRC and asking if they already handled it, and in case of a carcass if they will fetch or dispose of it
			Ensuring SRCs share similar messages with the world
			Bringing ill seals to an SRC
			Transporting/disposing seals
			Removing seal carcasses from the beach
			Pieterburen can take in seals from A Seal when A Seal has no more space
			Taking the final decision whether a reported seals should (not) be taken to an SRC based on an own estimation, seal guardians' advise & the photos and videos sent by seal guardians
			Treating seals
			Providing volunteers to SRCs
			Coordination/facilitation/mediation
			Providing SRCs with field knowledge
			Providing equipment for the creation of a Green Beach
			Among each other, SRCs and seal guardians encourage each other to follow the main principle of the SRA
			See same code Q1a
			Cordoning off an area
			Registering stranded seals
			Administration
			Administration of excursions
			Providing RTZ resources like funds an animal ambulance and a knowledge network; adhering to the SRA
			Other

Appendix D. Email Template

Below, the email template used to contact the respondents can be found. Please notice that the email was written in their native language and the researchers' phone number is not included for privacy reasons.

Onderwerp: Interviewverzoek voor scriptie over zeehondenopvang en toerisme op Groene Stranden

Beste *[naam geadresseerde]*,

Aan de hand van een tip van *[naam van de persoon die deze tip gaf indien van toepassing]* schrijf ik deze mail.

Voor mijn masterscriptie ben ik mij aan het verdiepen in zeehondenopvang in Nederland en het raakvlak met Groene Stranden (<https://www.hetgroenestrand.nl/>). De scriptie schrijf ik als onderdeel van mijn studie Tourism, Society and Environment aan de Wageningen Universiteit, en bouwt voor op mijn passie voor natuurbeleving en bescherming van zeezoogdieren.

Mijn interesse in zeehonden en Groene Stranden is ontstaan tijdens mijn onderzoeksstage bij Stichting Rugvin toen ik op zeehondensafari mee de Oosterschelde op mocht – en inderdaad ook zeehonden heb gezien! – en een kunstenaar uit Zierikzee die ik toevallig bij Studio Bruinvis tegenkwam mij vertelde over Groene Stranden. De kunstenaar bracht mij in contact met Geert Faasse (coördinator van de werkgroep Strand en Zee bij Natuur- en Landschapsbescherming Goeree-Overflakkee), die mij weer vertelde over het Zeehondenakkoord *[indien van toepassing]*. Van het een kwam het ander, en opeens hield ik mij bezig met de onderzoeksvraag: “*Welke aspecten zijn belangrijk voor het formuleren en uitvoeren van beleid voor de opvang van zeehonden in tijdelijke rustgebieden op Groene Stranden?*”. De Kwade Hoek dient hierbij als case study.

Om een antwoord op deze vraag te vinden benader ik belanghebbenden op het gebied van zeehondenopvang en Groene Stranden. Het doel is om een beeld te vormen van zoveel mogelijk verschillende perspectieven over zeehondenopvang, strandbeheer en strandtoerisme. Met deze inzichten wil ik een advies opstellen over de mogelijkheden om zeehondenopvang en toerisme op Groene Stranden samen te laten gaan. Dit advies zou in het bijzonder geschikt kunnen zijn voor de tussentijdse evaluatie van het Zeehondenakkoord in 2024.

Uw inzichten als *[rol]* zouden een hele waardevolle bijdrage leveren aan mijn onderzoek. Ik ben daarom heel benieuwd of u uw perspectief zou willen delen over de hierboven genoemde onderwerpen in een interview van ongeveer 45-60 minuten. Of dat u mij in contact kunt brengen met iemand die u hiervoor geschikt acht. Het interview kan plaatsvinden op een voor u geschikte locatie en tijd, bij voorkeur op enig moment in de periode 23-26 september (ook in het *weekend*) of op 28 of 29 september.

Ik ben benieuwd naar uw reactie.

We kunnen details ook telefonisch bespreken. Mijn nummer is ...

Alvast hartelijk dank!

Met vriendelijke groet,
Anne-Joëlle Derksen

Master studente Tourism, Society and Environment aan de Wageningen Universiteit
Telefoon ...

Email anne-joelle.derksen@wur.nl

LinkedIn <https://www.linkedin.com/in/annejoellederksen/>

Samenvatting verslag onderzoeksstage bij Stichting Rugvin <https://rugvin.nl/wp-content/uploads/2022/08/Nederlandse-samenvatting-stageonderzoek-Anne-Joe%CC%88lle-Derksen.pdf>

Appendix E. Journal Template

Date:

Activity:

Self-Reflection Memo:

Appendix F. Work Areas of the Seal Rehabilitation Centres



Figure 11. Areas the Seal Rehabilitation Centres of Eemsdelta, Terschelling, Ecomare, A Seal and Pieterburen cover. Please note that Pieterburen covers the whole of the Netherlands, except Texel. The area Pieterburen covers thus overlaps with that of Eemsdelta, Terschelling and A Seal.

Map: Seal Rehabilitation Agreement (2020, p. 13)

Appendix G. Visualisation of NLGO's Information Cart and Excursions



Figure 12. Front side of the information card NLGO uses to tell stories about life on a Green Beach. The sign contains pictures of trash on the beach and invites beachgoers to think of the question how many kilograms of trash manually cleaned up per year. Furthermore, brochures, tools to explore sea life (e.g. a net and binoculars), and sea and beach life finds (e.g. shells and skulls) are displayed on the shelf and beside the cart. The cart is funded by TGB and designed such that it can be pulled by a car.

Photo: NLGO, 14 September 2021.



Figure 13. Back side of the information card used to tell stories about life on a Green Beach. The sign contains pictures beach-nesting birds. Additionally, sea and beach life finds (e.g. skulls) and flash cards of animals that live in the sea and on the beach are displayed on the shelf. The cart is funded by TGB and designed such that it can be pulled by a car. Photo: NLGO, 14 August 2021.



Figure 14. An excursion organised by NLGO. Photo: NLGO, 10 October 2022.

Appendix H. Seal Rehabilitation Framework

Table 23. The Seal Rehabilitation Framework

Situation	Agreed Procedure
trapped and injured animals	<p>Give immediate assistance to trapped and injured animals (outside closed nature reserves, as referred to in section 2.5, subsection 1 of the Nature Conservation Act) consisting of:</p> <ul style="list-style-type: none"> • Medical and other assistance on site, and possibly relocation • Admission to a Seal Rehabilitation Centre • Euthanasia (if there is little chance of recovery).
suckling pups with no mother in the vicinity	<p>24 hours of observation, and ensure the pup is left in peace so that the mother can return. Rescue before 24 hours have passed if:</p> <ul style="list-style-type: none"> • the pup is in an awkward or dangerous place and/or • there are too many onlookers causing disturbance and there is no possibility of cordoning off the area or ending the disturbance through enforcement measures. <p>In the event that the pup is moved before 24 hours: provide a detailed record of the reasons and the process.</p>
weaned seals	<p>Make sure there is no disturbance within a 30 to – preferably – 50 metre radius around the animal (preferred action)</p> <p>Move the animal to a quiet spot if there are too many onlookers</p> <p>(Weaned seals will not be admitted, even in the event of underweight.)</p>
mildly ill animals	<p>24 hours of observation in the event of mild illness or if the animal is weak, to see if it recovers naturally. If necessary, ensure there is no disturbance around the animal or move it to a quieter spot. Admit the animal after 24 hours if it is clear that it will not recover without intervention.</p> <p>Admit earlier if:</p> <ul style="list-style-type: none"> • the animal is in an awkward or dangerous place; • on closer inspection, the animal is found to be seriously ill or weak (see ‘seriously ill animals’); • there is a risk of infection for people or other animals (zoonotic diseases);

mildly ill animals (continued)	animals	<p>Admit earlier if (continued):</p> <ul style="list-style-type: none"> • there are too many onlookers which is causing a disturbance and it is not possible to cordon off the area or take enforcement measures; • the animal is experiencing unbearable and unnecessary suffering (in that case, euthanasia). <p>In the event that the animal is admitted before 24 hours: create a detailed record of the reasons and the process.</p>
seriously ill animals		<p>Immediate admission to the seal rehabilitation centre for treatment (or, if there is little chance of recovery, for euthanasia) of any animals that are seriously ill, severely malnourished or weak</p>
in closed nature reserves (under section 2.5, subsection 1 of the Nature Conservation Act)		<p>The standard principle is no assistance or rescue.</p> <p>If necessary LNV and the Coastal Provinces may, under the relevant legislation, decide on their own authority to assist trapped or injured animals. Within closed nature reserves the competent Party is responsible for public communication.</p>

Note. From “Seal Rehabilitation Agreement”, 2020, p. 8 (<https://open.overheid.nl/documenten/ronl-43380cc3-b552-415b-bc7e-0d0b99334946/pdf>)

Appendix I. In-Depth Overview of Human-Wildlife Interaction Goals and Strategies, and Tools and Strategies to Create a TRA Interviewees Saw as Best

Table 24. Overview of human-seal interaction goals and strategies interviewees saw as best

Goal perceived most ideal	Strategy perceived most efficient to achieve goal	Ref code
Beachgoers and their dogs keep their distance (at least 30m) from seals	Signage: (a) at beach entrances showing that seals can rest on the beach with the help of a pictogram, and how to tell a seal is already marked and being observed by seal guardians, and (b) on the beach showing what the SRA says people must do when encountering seals to ensure the animals can rest and featuring a QR-code to the website about the SRA	I1, I2
Beachgoers are aware that they need to keep their distance from seals and that seals need rest. When this is the case, seals have more room to rest in their natural environment and can stay on the beach where they are found, also on crowded beaches	Education/signage: telling people how to handle seals and emphasising they must put dogs on a lead using means like information signs and carts, brochures and social media Enforcement: by Special Investigative Officers (SIOs) and a volunteer surveillance team to make sure beachgoers follow the rules explained on information signs	I3
People learn that seals belong in the sea and not in an SRC, except when they need help	Education: the beach community tells beachgoers stories about seals Signage: to inform beachgoers about seals	I4
People walk respectfully on the beach: they obey the rules, meaning they especially keep dogs on a lead	Signage: (a) at beach entrances indicating how to report a seal and how to tell a seal has already been reported, and (b) the sign that is already on the beach (see Figure 4 , p. 5) to tell the story about TGB Education: the beach community (a) tells beachgoers stories about what they can find and see on the beach, and (b) organises excursions to tell people the story about TGB	I5 I4 I4
Beachgoers stay away from seals so the seals can rest	Signage: to inform beachgoers about sea mammals and what rules they must obey Education: organising courses or excursions to teach people about sea mammals Zoning: keeping (a) the parts of De Kwade Hoek Beach that are already closed to beachgoers closed, and (b) De Kwade Hoek a designated beach for extensive tourism purposes without further promoting human-seal interactions	I6

Beachgoers dare to hear the answer no and let seals be	Education: making beachgoers aware that life is not just about recreation and consumption and death of seals is part of life	17
A separate part of the beach for humans and seals	Zoning: using a physical barrier to divide the beach into an area for seals and humans	17
Safety: seals can transmit diseases that make humans and dogs sick	Signage: near the stranded seal telling it is in observation and distance must be kept Education: in situations when there are many bystanders seal guardians explain to beachgoers that they should keep their distance from the seal or that they take the seal with them for safety reasons	18
Dogs are kept on a lead	Signage: bigger letters on the current signs as they already mention dogs must be kept on a lead, but in small letters Enforcement: (a) to make sure beachgoers really keep their dogs on leads, and (b) using a WhatsApp group in which designated people can inform Natuurmonumenten what happens on the beach Zoning: creating a part on the beach where dogs can roam freely	19
People are aware: - Of the effects of their activities on the lives of seals - That they should keep 30m from seals, remain calm, put dogs on a lead, can call the SRC when they think something is wrong, and should not do anything else	Signage: (a) at beach entrances telling seals can be encountered on the beach, what grey and harbour seals are, 30m distance must be kept from seals, dogs put on a lead, and showing what sick and healthy seals look like, and (b) at the high-water line using the yellow signs from the website about the SRA, and (c) possibly at 100-200m distance from the seal to remind dog owners of the rules using the yellow sign from the website about the SRA Education: training dog owners to keep their dog on a lead when they see wildlife	110
People leave seals alone because they understand what the needs of seals are and keep their distance	Education: (a) seal guardians draw on the knowledge from their training to tell beachgoers the stranded seal they are handling stays on the beach, and (b) sharing information on how to handle seals at places where beachgoers cannot escape from it Zoning: (a) resting areas for seals (i.e. where beachgoers cannot come) with Green Beaches on its edges and behind that normal beaches, and (b) on Green Beaches a rest radius of 30m around a seal or alternatively 10m when there are multiple seals	111
Getting rid of human-seal encounters because there is much more to see on the beach: emphasising the bigger picture and natural processes	Education: the beach community tells beachgoers stories on what they can see and do at the beach	A

Table 25. Overview of tools and strategies interviewees saw as best for creating TRAs on any Green Beach (blue), at De Kwade Hoek (green) and physical barriers' usefulness herein (red)

Explanation [ref code]	Strategy perceived best
<ul style="list-style-type: none"> - Natuurmonumenten prefers few <i>poles</i> due to visual pollution [I3] - Controlling where the beach and sea separate is hard [I7] - Seals not always stay where they are put for observation as they are not static [I1, I2, I8, I10], meaning they can move to other parts of the beach [I8, I10], onto walking paths [I8], and to the water and swim away [I8, I10]. This makes a <i>rope gate</i> impractical [I1, I2] - Physically closing off part of a beach is not always helpful due to disruption (e.g. the sound of <i>plastic ribbons</i> fluttering in the wind and people who continuously move <i>picket poles</i> when seals move) [I1], the tide (e.g. <i>picket poles</i> and <i>signs</i> wash away) [I2, I3], the stealing of <i>signs</i> [I2], and seals do not always stay where they are found/put for observation [I1, I2] 	Considering
<ul style="list-style-type: none"> - Using <i>the part that is cordoned off in the nesting season</i> [I3-I5, I9, A] - Not using the part for nesting birds as <i>cars</i> can disrupt their rest [I10] - Blocking access for people to the TRA with a physical barrier (e.g. <i>fence</i>) [I11]/putting <i>ropes</i> between the <i>row of wooden poles</i> [I3] and adding a(n s-shaped) <i>walking path</i> around it (e.g. from the waterline to the dunes and back) [I7, I8, A] and <i>tower viewer</i> [A] so people can watch seals from afar, have beach access [I7, I8, A, T] and walk to the northern tip [I4] - <i>Permanently closing a part</i> where few people come [I6, I7]/near the Haringvliet Dam where birds always are and seals rest at times. Natuurmonumenten already explores this [I5, I9] - Marking seals with <i>biodegradable spray</i> to tell them apart and they are observed [I10, T] - Selecting a part for year-round use [I8] and only indicating the TRA on the <i>map</i> for the permit as physically closing off the beach is not always possible, and few people visit it [I3] 	Zoning
<ul style="list-style-type: none"> - Natuurmonumenten must <i>permit</i> part of its beach can be cordoned off for seal rehabilitation [I1, I10, A], for placing <i>signs</i> about seals [I3], and make agreements with Rijkswaterstaat on roles as the beach grows seawards [I4, I5] - Natuurmonumenten should consult A Seal (i.e. the closest SRC) and its seal guardians for advice on [I8]/<i>involve organisations with a stake in beach use</i> in [T] the design of a TRA - Natuurmonumenten should consult landscape specialists about ways people can access the beach behind the TRA since the area behind it otherwise becomes inaccessible [I8] - <i>Staying in close touch with people</i> who frequently visit the beach and walk a fixed route (e.g. people who walk their dogs): if they find a seal, they can report it [A] - TGB's project manager can <i>provide NLGO with tools</i> to set up a TRA [I6] 	Collaboration
<ul style="list-style-type: none"> - <i>Orally telling stories</i> on the beach about seal rehabilitation [I4, A] and where to watch seals responsibly (i.e. without disturbing them) [A] - <i>Orally telling fun facts</i> on the beach about life on Green Beaches from different perspectives (e.g. what seal guardians and a Birds Group member would say), and telling and showing what to look for (e.g. lending <i>binoculars</i> to show distant dots are seals) [A] - Showing marine life (e.g. using <i>drag nets</i>) and <i>orally telling</i> about it on the beach [I4, I5] - Using the <i>information cart</i> to enthuse people about nature and stimulate tactile play (e.g. looking for shells and telling why some have holes) [A] - Clarifying on the <i>SRA's and GO Goeree-Overflakkee's websites</i> seals rest on beaches, thus dogs must be put on leads and distance kept, and how to (identify) report(ed) seals [I1, I2] - Not teaching about seals on <i>social media</i> because beachgoers can put photos and wrong explanations there and lay-out is messy [I4, A], but on the <i>beach community's website</i> [A] 	Education

- <i>Teaching SRC visitors</i> how to report seals and ill seals like to be on land [I10]	
- To state (why) the TRA is off-limits [I3, I9-I11, A]	Signage
- To explain seals can rest on the beach and seal encounter rules [I1, I2, I4, I5, T]. <i>Yellow signs from the SRA's website</i> are particularly apt for this and to avoid they wash away they could be placed on <i>wooden beach posts</i> [I1, I2] and at beach entrances [T]	
- Clearly communicating marked seals are being observed since seal rehabilitation increasingly happens on the beach, not in an SRC [I10]	Communication
- Creating and implementing a <i>communication plan</i> . <i>Signage</i> should be part of this [I1, I2]	
- Not promoting that rehabilitating seals can be seen at De Kwade Hoek [I3-I5]	Enforcement
- Someone who <i>informs beachgoers</i> they must keep distance from seals, but this does not necessarily have to be done by a seal guardian [I8]	
- When (partially) cordoning off the beach, <i>enforcement</i> is crucial as not everyone will adhere to the rules about keeping distance from seals [I7, I8], read or care about information on the signs [I3, I10] and like they suddenly cannot walk where they always did [T]	

Appendix J. Procedures for Seal Rehabilitation in Foreign Countries

Table 26. Seal rehabilitation procedures per foreign country where grey and harbour seals that swim in Dutch waters are also known to migrate between

Country	Known number of SRCs, MMROs and seal rehabilitation procedures
Denmark	<ul style="list-style-type: none"> - No rehabilitation of seals in SRCs at all since the 1994 Trilateral Government Conference on the Protection of the Wadden Sea. Reason: in Denmark, rehabilitation became seen as a way to satisfy the needs of humans to help and nurse animals, something “which has nothing to do with wildlife management in general” (CWSS, 2003, p. 40) - Sick or injured seals are either left alone or euthanised by wildlife rangers. Sometimes, seal pups are also taken into captivity, where they stay permanently since releasing them back into the sea and on beaches is not allowed (Van der Zande et al., 2018)
Germany	<ul style="list-style-type: none"> - Has three SRCs. They are located in the following states: <ol style="list-style-type: none"> 1. State of Low Saxony (Seehundstation Nationalpark-Haus). Website: https://seehundstation-norddeich.de/website/ 2. State of Schleswig-Holstein (Seehundstation Friedrichskoog & Robbenzentrum Föhr). Websites: https://www.xn--robbenzentrum-fhr-e0b.de/ and https://www.seehundstation-friedrichskoog.de/en/start-eng/ - Similar procedures to the SRA, also for everything that concerns people who may handle seals (i.e. seal hunters). However, as opposed to the SRA, seal hunters are appointed by the state (Seehundstation Friedrichskoog, 2021) - Each state develops their own guidelines (CWSS, 2003)
Belgium	<ul style="list-style-type: none"> - Has one SRC: SEA LIFE Blankenberge. Website: https://www.visitsealife.com/blankenberge/en/ - Similar procedures to the SRA, also for everything that concerns people who may handle seals (SEA LIFE Blankenberge., n.d.). However, as opposed to the SRA, malnourishment is also mentioned as a situation in which any stranded seal should be rehabilitated. Another difference between the Netherlands and Belgium is that Belgian beachgoers are actively encouraged to send photos and videos of stranded seals to an SRC, while Dutch beachgoers are not
United Kingdom	<ul style="list-style-type: none"> - Has over 650 rehabilitation centres for wildlife, including seals (Sayer et al., 2021) - Has 3 MMROs: <ol style="list-style-type: none"> 1. Royal Society for the Prevention of Cruelty to Animals (RSPCA). Website: https://www.rspca.org.uk/ 2. British Divers Marine Life Rescue (BDMLR). Website: https://bdmlr.org.uk/ 3. SEA LIFE TRUST Cornish Seal Sanctuary (CSS). Website: https://sealsanctuary.sealifetrust.org/en/ - Similar procedures to the SRA (Sayer et al., 2021; Guidance Seals, 2023; RSPCA, 2023a). However, as opposed to the SRA, malnourishment is also mentioned as a situation in which any stranded seal should be rehabilitated

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- France** - Unclear number of SRCs and MMROs. Search queries like “centre de sauvagement des phoques en France”, “centres de soins des phoque en France”, “réhabilitation des phoques en France” and “association pour la recueille et réhabilite des phoques en France” and an article from Sextant (n.d.) that resulted from this search suggest that seal rehabilitation involves many different organisations, each focusing on its own region and not necessarily cooperating with organisations from other regions. An overview of the first impressions:
1. Ligue de Protection des Animaux du Calais (SRC and MMRO). Website: <https://www.lpa-calais.org/>
 2. Océanopolis (SRC). Website: <https://www.oceanopolis.com/>
 3. Centre d’Hébergement et d’Etude sur la Nature et l’Environnement (SRC). Website: <https://www.associationchene.com/centre-de-sauvegarde/les-phoques/>
 4. Centre de sauvegarde LPO de l’Ile Grande (SRC). Website: <https://www.lpo.fr/la-lpo-en-actions/agir-pour-la-faune-en-detresse/centres-de-soins>
 5. Aquarium de Biarritz (SRC). Website: <https://www.aquariumbiarritz.com/en/grey-seal/>
 6. Association Conservation Mammifères et Oiseaux Marins de Bretagne (MMRO). Website: <https://www.oceanopolis.com/connaitre-nos-missions/conservation/acmom/>
 7. Réseau National Echouage (MMRO). Website: <https://www.observatoire-pelagis.cnrs.fr/echouages/reseau-national-echouage/>
 8. Associations that are affiliated with the national fire department (MMRO). Explanation, see: <https://www.associationchene.com/centre-de-sauvegarde/les-phoques/>
 9. Groupe Mammalogique Normand: Brigade Bénévole Phoque (MMRO). Website: <http://www.gmn.asso.fr/index.php?post/Nos-actions-en-faveur-des-mammif%C3%A8res-marins>
 10. Picardie Nature (MMRO). Website: <http://www.picardie-nature.org/protection-de-la-faune-sauvage/protection-des-phoques/>
- Similar procedures to the SRA (Barnabé, 2022). However, as opposed to the Netherlands, France already pays special attention to educating the public about seal interactions at hotspots for land-based seal watching. The Somme Bay example: <https://parc-marin-epmo.fr/editorial/phoques-lutte-contre-le-derangement>
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