

**CHANGING TIDES IN MAR MENOR?
IS THE LEGAL PERSONHOOD MODEL A REFLECTION OF
SYMPTOMATIC WAVES OR SYSTEMIC CURRENTS
CONSIDERING ENVIRONMENTAL PROTECTION
LEGISLATION?**

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Changing tides in Mar Menor?

Is the legal personhood model a reflection of symptomatic waves or systemic currents
considering environmental protection legislation?

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KEYWORDS: environmental protection, rights of nature, Spain, legal personhood, systems thinking

Abstract

Mar Menor is Europe's largest saltwater lagoon, despite being declared a Natura 2000 and Ramsar site in addition to other national environmental protection legislation, it has become severely degraded over the past decades. This thesis seeks to gain a deeper understanding of the perceived shortcomings of environmental protection legislation by participants and how the legal person model, as a form of attributing rights to nature, could be a better solution as an environmental protection tool. In 2022, Mar Menor was granted legal standing through a popular legislative initiative (ILP) that originated from the University of Murcia, which pioneered the right of nature movement in Europe. Due to the increasing importance of halting environmental degradation and transitioning into an increasingly just future which allows both nature and society to thrive, it is important to examine and explore novel ways of protecting nature and incorporating it differently into our governance structures.

Drawing on evidence from semi-structured interviews with 10 stakeholders, this study reveals the participants' multi-layered understanding of the problem with previous environmental legislation. In addition to revealing diverse views on the suitability of the legal person model as a new environmental protection tool.

Due to the exploratory nature of this work, we focus on laying the groundwork for future more in-depth studies, which will potentially be able to draw conclusions on the impact of this novel approach. Drawing from existing concepts, we contextualise and conceptualise the findings, illustrating the problem using the Iceberg model and depicting the potential underlying causes of degradation of Mar Menor. Additionally, we reflect on the possible leverage that the legal personhood of Mar Menor is perceived to unfold regarding the respective layers of the developed iceberg model.

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Introduction

The intertwined crises of climate change and biodiversity loss have thrust the imperative of protecting ecosystems into the forefront of global consciousness. As the consequences of human activities on the environment become increasingly apparent, innovative approaches to conservation and protection of nature are emerging. One such approach gaining traction is the concept of Rights of Nature, which reframes the narrative around environmental protection from a selfless endeavour to an inherent obligation to secure the habitability and survival of this planet.

Mar Menor, a once pristine coastal saltwater lagoon in south-eastern Spain, stands as a poignant example of the devastating impact of unregulated economic development on fragile ecosystems. Over time, economic activities have led to an increase in pressure on this unique environment, triggering widespread ecological degradation. In light of this destruction and the inability of national and international environmental protection legislation to protect Mar Menor, a chorus of voices has risen in defence of Mar Menor.

Central to this is the proposition to grant Mar Menor legal personhood rights—a novel yet increasingly popular notion aimed at endowing natural entities with rights in the form of legal representation in the hope of revolutionising environmental legislative protection and addressing the complex problems Mar Menor is facing. This thesis explores the participants' understanding of the shortcomings of the current environmental protection legislation for Mar Menor in addition to why they understand the legal personhood model to be a better solution.

The attribution of legal personhood status to Mar Menor, being the first of its kind in Europe, serves as a compelling case study. By examining the legal personhood model as a potential solution for protecting it from further degradation, the research aims to contribute to the ongoing discourse examining the different applications of the legal personhood model as a new mode of situating natural entities within social ecological systems. We follow Tanasescu (2022) who in his book *Understanding the rights of Nature – A critical introduction* delineates that the manner in which the legal personhood model is constructed and embedded within existing power relations is a defining factor of contemplation.

Due to the recent approval of the legal personhood model in Mar Menor, it is not possible to study the practical application and construction of this new representational element in relation to its impact. Nonetheless, exploring the participants' views on previous shortcomings of environmental legislation and their hopes and thoughts on what remediation the legal personhood model is envisioned to offer, proposes an intriguing angle for an exploratory study, which can also be understood to reflect the participants' encountered problem and solution perception. We further enrich this exploratory endeavor by conceptualizing the findings in an intersecting manner, reflecting on the question of whether or not the perceived solution is able to leverage the perceived problematic. The following thesis is constructed as follows:

Chapter one and two aim to give a concise overview of the central theoretical concepts to this thesis, namely the complexity of environmental degradation as a social ecological issue. Followed by a brief introduction to social-ecological systems, the text considers the iceberg model as a frame to understanding underlying causes of problems within systems and through overlapping the concept of leverage points understanding how to induce change.

Chapter two succinctly recounts the emergence of the rights of nature concept and elaborates on one central component, the legal personhood model, which is further depicted through examining previous cases of attribution of legal personhood in New Zealand and Colombia.

Chapter three introduces the case inherent to this thesis, and provides an overview of the research ground, namely Europe's largest saltwater lagoon Mar Menor, located in the southeast of Spain. Moreover, it discusses the environmental problems this lagoon is facing and previous efforts to protect it through international and national protection legislation. Finally, it introduces the new law 19/2022 which attributes Mar Menor with the legal personhood status.

Chapter four is an in-depth description of the research design and methodology employed within this research project, which at its heart consists of 10 semi-structured interviews.

Chapter five discusses the obtained results of the previously conducted and analysed interviews. Additionally, it conceptualises and reflects on the problem – solution intersection. Lastly, we summarize our findings in the conclusion section, whilst mentioning potential limitations to this research and recommendations for the future.

1 Chapter : Complexity of Environmental Degradation

1.1 Humans as a Catalysing Agent

In recent years, climate change and biodiversity loss have become central issues worldwide. An inherent component of this is environmental degradation, mainly understood as the depletion and degradation of the biosphere. This can be exemplified in poor quality of air due to pollution, habitats for wildlife ceasing to exist, waterways such as rivers carrying increasing loads of pollution or having to yield their natural course due to mega construction projects such as dams or simply a straighter watercourse for the benefit of ships (Kumar Maurya et al., 2020).

The role of humans as a catalysing agent is echoed by the declaration of a new geological epoch, the Anthropocene. It is defined by some as beginning in the 1950s and emphasises the notion of humans as a geological force and leading actor in environmental change. However, scientists have disputed the definition of when the Anthropocene begins. Lewis & Maslin (2015) argue that various dates can fulfil the criteria of an emergent new epoch; to illustrate this, they propose two alternative dates: the 1610 start of European colonisation and the 1964 beginning of capitalism. In his letter of resignation from the Anthropocene Working Group, Erle Ellis raises concerns about the narrow conceptualisation of the Anthropocene and the ramifications this will have on the public perception. He states:

„it is no longer possible to avoid the reality that narrowly defining the Anthropocene in the way AWG has chosen to do has become more than a scholarly concern. The AWG's choice to systematically ignore overwhelming evidence of Earth's long-term anthropogenic transformation is not just bad science, it's bad for public understanding and action on global change. This, at a time when broader cooperation to address these grave societal challenges is more critical than ever. To define the Anthropocene as a shallow band of sediment in a single lake is an esoteric academic matter. But dividing Earth's human transformation into two parts, pre- and post- 1950, does real damage by denying the deeper history and the ultimate causes of Earth's unfolding social-environmental crisis. Are the planetary changes wrought by industrial and colonial nations before 1950 not significant enough to

transform the planet? The political ramifications of such a misleading and scientifically inaccurate portrayal are clearly profound and regressive. Perhaps AWG's break in Earth history will simply be ignored outside stratigraphy. But this is undoubtedly neither AWG's goal, nor is it the way AWG's narrative is being interpreted across the public media."

(Ellis, 2023, p. 1)

Likewise, Brand & Wissen (2017) maintain that the idea of the Anthropocene, regardless of its timestamp, presents human power but obscures who and what is powerful, moreover how that power is used. Ghosh (2021) in his book *The Nutmegs Curse - Parables for a Planet in Crisis*, traces dynamics of climate change back to sprouting within an ancient geopolitical order build through western colonialism. This means that while there are academic debates about when humans can be considered to be noticeably transforming the world around them, it is clear that they have. Thus environmental degradation can be understood as a social issue. This can be seen reflected in the increase of importance sustainability has gained in the political realm (Patterson et al., 2017). Since the publishing of the Brundtland report by the United Nations in 1987 which coined the term sustainable development, the question of how to develop within the earth's capacity has become central. Earths capacity has been studied by scholars such as Rockström et al. (2009) who in their publication "A safe operating space for humanity" identified nine earth-system processes, which if transformed could induce severe environmental changes. Thus, they refer to them as planetary boundaries (Figure 1). Similarly, the Paris Agreement in 2015 limited the global warming increase to 1.5 Celsius, a target which today is seemingly far out of reach (Cointe & Guillemot, 2023).

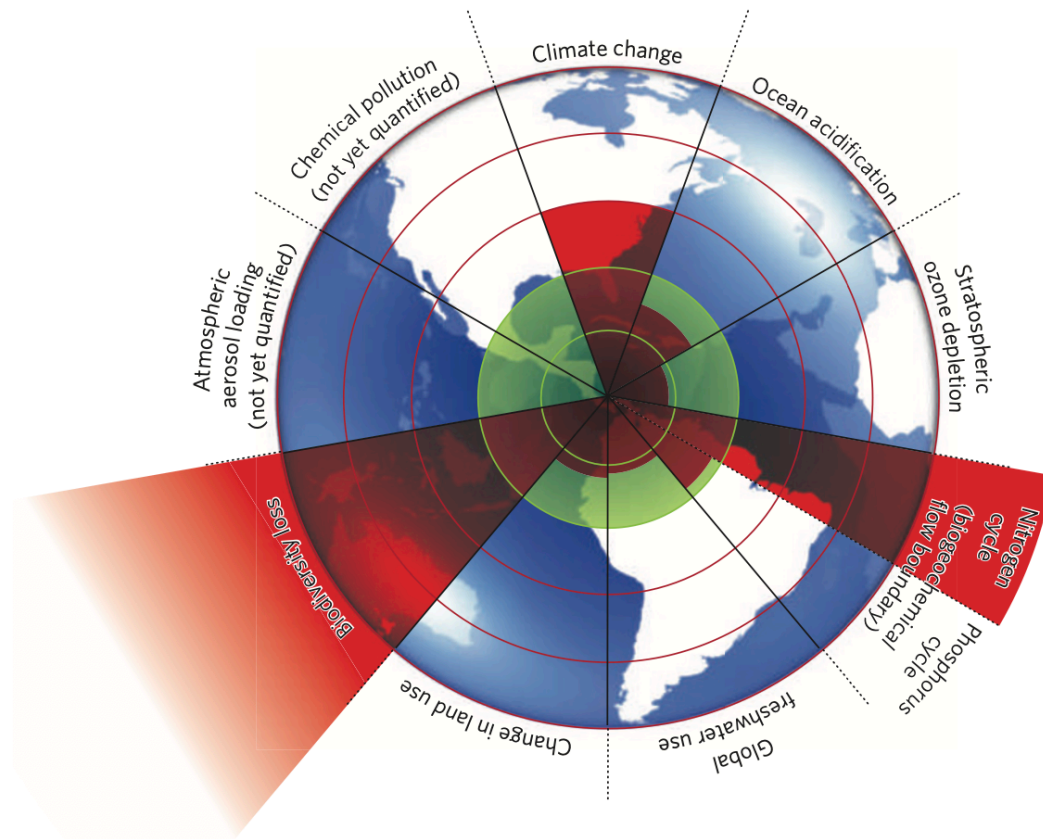


Figure 1: Illustration of the planetary boundaries. The green wedge exemplifies the safe operating space. The red wedge the current position. (Rockström et al. (2009) :472)

Narrowing our focus back to the central issue of environmental degradation, it becomes evident that the pursuit of economic growth is also an important factor here. Lessenich (2018) describes the phenomenon of a *society based on externalization*¹, introducing the idea that capitalist societies are dependent on the ability to externalize new production and thus great number of individuals, mainly in capitalistic density zones (e.g. USA and Europe) live on the cost of nature and human resources extracted elsewhere. Take for instance the emittance of air pollution or green-house gases in the global south, in order to produce consumption goods for the global north, or by individuals or even kids risking their lives to mine expensive minerals for the production of batteries to perpetuate the production of electrical cars (Agusdinata et al., 2022; Amnesty International, 2016). In a similar vein Brand & Wissen (2017), state: “(...) this logic of economic reproduction on a constantly expanding basis also has a very concrete, material and territorial dimension: in order to survive in the long term, capitalism must constantly expand its sphere of influence to new social areas, fields and spaces. Economic

¹ He uses the German term: Externalisierungsgesellschaft

activity based on the principle of the profitable use of capital has a built-in claim to universalization, even a compulsion to perfection: the "whole world" tends to become its territory, in principle "everything" becomes an object of economic exploitation, ultimately "everyone" is drawn into the maelstrom of the capitalist world of commodities."² (p. 30).

These concepts, although rich in possible deeper discussion, will not be analyzed in detail here. They were touched upon to illustrate the ever-expanding need of economic growth, its inherent axiom of social inequality and the spatial and temporal disjuncture. Also pertinent to environmental degradation, which can sometimes remain elusive as the occurrence and cause of environmental degradation are often only connected through a long supply chain of intermediaries.

The multitude of dimensions within the phenomenon of environmental degradation in terms of occurrence, impact and uncertainty classifies them as complex problems often also referred to as wicked problems (Levin et al., 2009). The term "wicked problems" lends itself useful, when attempting to grasp the complexity. It originated from the social planning realm with focus on policy issues by Rittel & Webber (1973) and into other scholarly fields, and can be defined by being intractable social issues that involve multiple stakeholder groups with sharply divergent values and perspectives and are characterised by high levels of complexity and ambiguity, defying traditional problem-solving approaches (Hanson, 2019).

1.2 Understanding Environmental Degradation through Socio-Ecological Systems

The theoretical concept of social ecological systems (SES, hereafter) lends itself useful to analysing complex issues. It can be regarded as an analytical framing of human-environmental interactions and is based on the idea that they are inevitably interconnected and thus need to be regarded from a holistic, systemic perspective (Bruckmeier, 2016; Halliday & Glaser, 2011). Elinor Ostrom (1990), who in her seminal work challenged the idea of the tragedy of the commons as emphasized by Hardin (1968) by arguing that not privatization or strong regulation of public goods are best practices to avert the tragedy of the commons rather improved management by stakeholders could be the answer. Ostrom (2009) framework for social-ecological systems, initially envisioned to contribute to the advancement of collective

² The original quote is in German and was translated by this author

action theory later transitioned into a diagnostic tool for sustainability within social-ecological systems (Partelow, 2018). Figure 2 illustrates the four crucial components of a particular social-ecological system. To better understand figure 2, let us demonstrate its composition using the example of a park, which can be defined as the *resource system*. This *resource system* is furthermore divided into its various *resource units*, e.g. parts of the present woodland areas and grassland, and nature educational centre. *Governance systems* are defined as the spoken and unspoken rules and regulations for governance within the context of this park. *Users*, or stakeholders can be individuals, organizations, communities or even the state. Each of these elements interacting with one another results in an outcome which ripples onto another *related ecosystem* (illustrated in Figure 2). In this sense, figure 2 also illustrates that an SES do

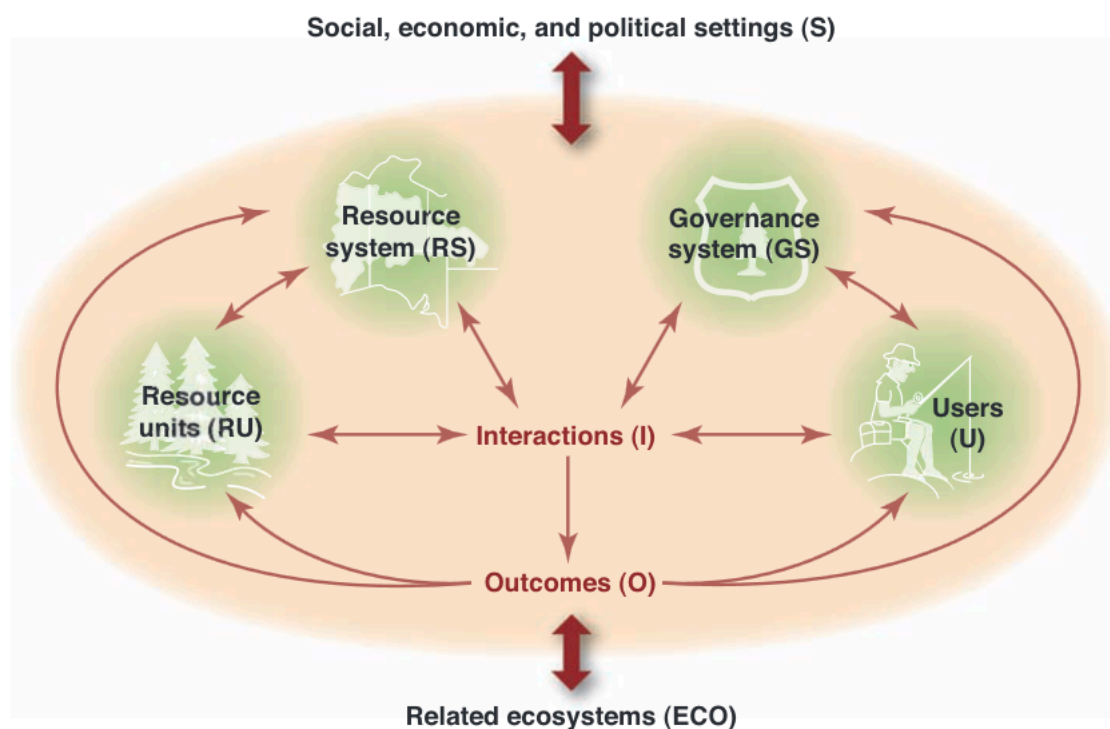


Figure 2: Core subsystem of socio-ecological systems (Ostrom (2009))

not exist in a vacuum, rather its boundaries could be regarded as an analytical frame for comprehension. Take for instance the aforementioned example of a park, which naturally is embedded in a broader context such as a city or the broader country where it is dependent on, for instance, the regulations passed by the city council on parks.

Understanding environmental problems through this lens allows practitioners to identify relevant variables within their defined SES and gain deeper knowledge about the interactions of these variables that can later be studied and compared with a greater pool of

studies, ultimately advancing knowledge on, for instance, diverse effects sustainability policies or defined factors have on different SES (Fischer et al., 2015; Ostrom, 2009). One can draw conclusions from one context to another but ultimately there is no one-size-fits-all answer to environmental problems as they are context-dependent.

It is important to note that, due to the large scope covered and the fact that SES covers a space within, in-between, and outside of both social and natural science, there are certain conceptual and methodological ambiguities within this research area that should be considered (de Vos et al., 2019). Moreover, this concept has been criticized for reinforcing a potentially false dualistic understanding of humanity and the environment as separate entities (Raymond et al., 2013). While Raymond et al. (2013) illustrates the implicit meanings and understandings that emerge when thinking about SES as closed loop systems with a focus on ecosystem services or disservices, other scholars focus more on the potential limitation of defining entities such as social and natural. Rather than remedying the separation of the human and environmental world it could unintentionally further perpetuate it, this is considered to be specifically relevant for ontologies rooted in western thought (Liu et al., 2007; Sala & Torchio, 2019). As West et al. (2020) puts it: „While many of us might intuitively agree that our experience reveals a dynamic, interconnected world of constant change, formal Western thought remains heavily indebted to modernist or ‘substantialist’ paradigms that aim to bring order to experienced complexity by identifying the static, foundational ‘substances’ or ‘entities’ imagined to underpin it.” (p.304). Despite these shortcomings, the SES perspective is still very useful in a more pragmatic sense, while admitting to employing dualistic frameworks. It maintains familiar concepts, while simultaneously pushing their boundaries, and serves as a strategic approach in effecting practical change within a world that still predominantly relies on such concepts (West et al., 2020).

Succinctly put, up until this point we have argued that environmental degradation can be considered a social complex problem. It is useful to view it through the lens of social-ecological systems as this allows a better understanding of the interconnections within the various determining elements within the social ecological system.

1.3 The Iceberg Model and Leverage Points

Similarly, the iceberg model is a tool that allows us to think about specific events from a systems perspective, in an attempt to understand the underlying purpose and thus gain a better understanding of the causes of the problem (Boylston, 2019; Davelaar, 2021; Huntjens, 2021). The iceberg metaphor is not a novel idea and draws on Sigmund Freud's idea of the unconscious and subconscious mind. It aims to illustrate the elusiveness and non-linearity of potential root causes that prove to be very useful when seeking a deeper understanding and attempting to solve complex problems (Boylston, 2019).

Here we present the iceberg model as shown by Davelaar, p. (2021, p. 731), it combines four different concepts together producing a comprehensive composite depiction of systemic behaviour, intervention, and transformation of an element within a SES (Figure 2). It is beyond the scope of this essay to discuss all elements in this composite iceberg model as conceptualised by (Davelaar, 2021). It was primarily chosen as it merges the iceberg metaphor with the concept of leverage points understood as ways to intervene within and thus transform the SES. The iceberg model is more commonly illustrated with four layers: *Events*, *Patterns (or Patterns of Behaviour)*, *Systemic structures* and *mental models*. Davelaar (2021) includes the layer *purpose*, which is situated in between the *systemic structures* layer and the *mental models*. Important to note is that this model can be understood both from the bottom-

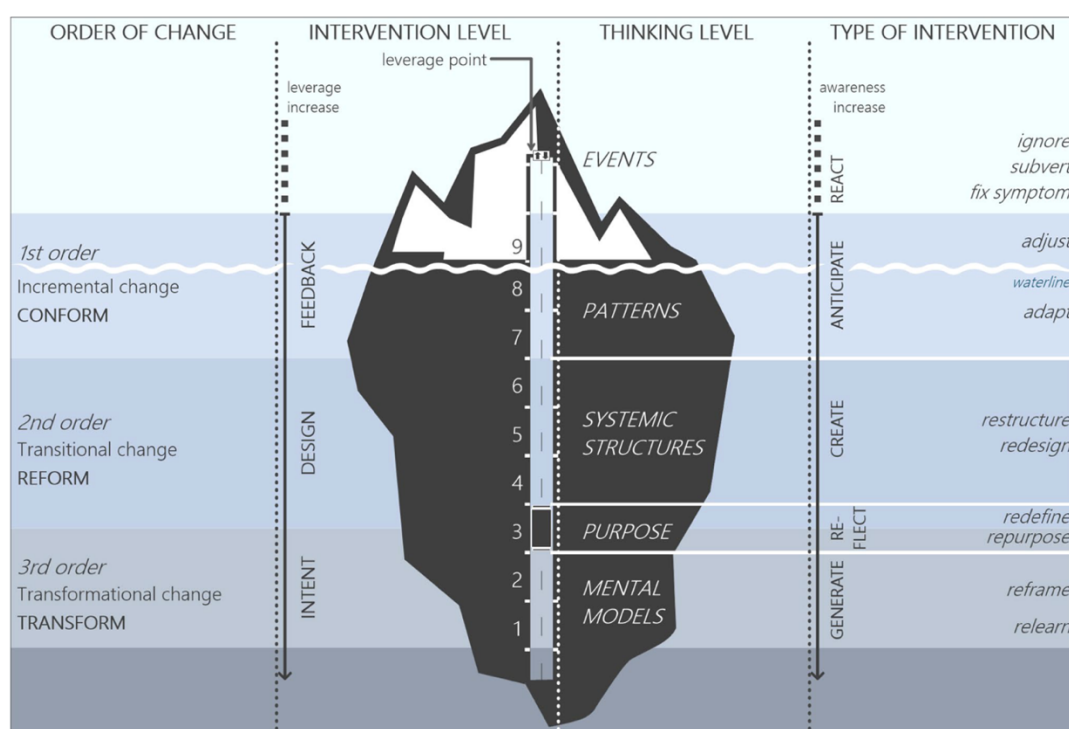


Figure 3: Composite iceberg model by Davelaar (2021 p. 731)

up and top-down. Let us examine the layers of the iceberg model more closely (Figure 3). Events, much like the tip of the iceberg, are visible elements which noticeably change – this for instance could be a dying forest, a friend who no longer speaks to you, or for the consumer, missing fruit in a supermarket during winter. These events are often framed as "the problem". Here is where the iceberg metaphor becomes evident, because figuratively speaking these events receive more attention than the other more elusive layers; sometimes these events are just symptoms of a much deeper underlying issue or interconnected web of dependencies (Abson et al., 2017; Davelaar, 2021; D. H. Meadows, 2009).

Beneath the events layer, sits the patterns of behaviour layer, focusing on historical trends of ongoing events. It sets the event into a richer context, providing a better understanding of its historical or behavioural pattern. Next, the systems structure reveals latent behaviour within the system, allowing insights into the source of system behaviours as it introduces certain loops and interlocking elements. Take for instance, governance decisions, the construction of dams or land use change, which could be the cause to the visible event of soil degradation or absence of diverse flora and fauna. Lastly, mental models as the bottom layer of the iceberg system are often referred to as paradigms, worldviews, values or assumptions that individuals hold. Paradigms and worldviews are often used synonymously but one could argue that values and assumptions pertain to a certain paradigm and worldview, and together they make up the mental models which will be elaborated in the next subsection (1.3.1 - Paradigms and Worldviews).

Due to the broad call to action within the systems thinking scholarly body to go beyond the tip of the iceberg when addressing perceived events (Abson et al., 2017; Guttal, 2012), naturally the question arises of how to address these issues. This is depicted in figure 3 through yet another concept, which is the aforementioned leverage points as introduced by D. Meadows (1999). They are understood as places to intervene in a system and here Davelaar (2021) illustrates them by paralleling it with an elevator shaft (see Figure 3). Initially, D. Meadows (1999) defined twelve leverage points, which sit on a spectrum from shallow to deep and should be considered as interconnected (O'Brien & Sygna, 2013). Abson et al. (2017) classified the twelve points into four different broad types: *parameters*, *feedbacks*, *design* and *intent*, of which the latter three are illustrated within this model. We focus on the conceptualization of Abson et al. (2017) as it is the one depicted within figure 3 and briefly describing each type in order from shallowest to deepest leverage.

Parameters, which Davelaar (2021) did not depict in this graphic, are understood as mechanistic and changeable elements, for instance taxes, policies or international standards. Next are feedbacks which are defined as interacting elements driving internal dynamics. The design type leverage refers to the way in which information flows, power, rules and self-organisation are structured. Finally, intent embodies the goals, norms and values within a system, in other words the underlying paradigms. As mentioned before the leverage points are understood to range from shallow to deep, which classifies them into a hierarchical order of small transformational potential to great transformation potential. In a similar vein, Davelaar (2021) draws from Sterling (2010) three-fold levels of change. This hierarchy of order of change enrich the concept of deep or shallow, to more practical conceptualizations such as *incremental change*, *transitional change* and *transformational change*. D. H. Meadows (2009) illustrates the difference between transitional and transformational change is the reflective element of thinking about the system's purpose as informed by the underlying mental models. Leveraging the feedback layer, on the other hand, is only offering shallow leverage or incremental change. To visualise this differing effect of change or leverage, we use D. H. Meadows (2009) example and imagine a basketball team as a system. She explained that if you change the players within the team, the performance can be better or worse, but it remains a basketball team. However, if the rules of the game are altered to soccer, the basketball team will be transformed entirely.

Abson et al. (2017) argue that, to this date, sustainability policies have failed due to conforming to shallow leverage points, which only offer incremental change. They state: "This is apparent in the many policy instruments that focus on simply adjusting parameters, for example, by setting targets or providing financial incentives within existing structures, including carbon pricing and REDD+, green taxes, targets to increase the extent of protected areas and agri-environment schemes." (p. 33). In a similar vein, scholars argue that the search for solutions to remedy environmental damage has been too narrowly focused on the techno-scientific sphere, which obscures the large social component, as previously argued, that sits within the present crisis scape, and only banks on technological advances to solve the issue (Brink & Wamsler, 2019; Göpel, 2016; Müller-Rommel & Meyer, 2001; Wamsler, 2019; Woiwode, 2016; Woiwode et al., 2021). These problem-solving strategies have been successful, when considering, for example, the removal of toxins from fertilisers or the advancement in the production of less environmentally damaging cars. Nevertheless, their

positive impact is quickly outweighed by the unending demand. Take for instance, the automobile industry. Here catalytic converters were invented to diminish the toxic exhaust from cars, however in the grand scheme of things, the emissions of the automobile industry have steadily grown over the years (Williams & Blyth, 2023).

Before concluding the previous section describing the iceberg model we would like to briefly point out some of its limitations. First and foremost, one must keep in mind that any model is not an accurate depiction of reality D. H. Meadows (2009) and although the iceberg model, with its metaphorical attributions, entices users to reflect on the underlying issues, potentially also due to the fact that there is a quick association with the Titanic, whose fate was determined through not accounting for the latter, it could also limit the reflection due to being anchored within its physical attributes. A recent study, which incorporated the iceberg model, argued that it fails to depict embeddedness within a larger system and instead offers the tree metaphor figuratively speaking illustrating the connection to the surrounding environment, as an alternative depiction model (Betley et al., 2021).

We will focus on the intent leverage point which has received much attention as many scholars agree, pioneered by Donella Meadows that the deepest transformative capability is positioned within the mental models layer (Brink & Wamsler, 2019; D. Meadows, 1999; D. H. Meadows, 2009; West et al., 2020; Woiwode, 2016). Pelling (2010) summarizes this notion as: “perhaps the most profound act of transformation facing humanity as it comes to live with climate change requires a cultural shift from seeing adaptation as managing the environment ‘out there’ to learning how to reorganize social and socio-ecological relationships, procedures and underlying values ‘in here’.” (:88). In a similar vein, in her graphic Davelaar (2021) defines this as the transformational order of change, exemplifying it with the intervention of relearning and reframing the intent of a given system (here figure 3). This is also often referred to as a shift in paradigms (Göpel, 2016; Huntjens, 2021; D. Meadows, 1999; Woiwode, 2016; Woiwode et al., 2021). The increasing attention the concept of transformation in terms of addressing complex social-ecological problems has led to a desire to understand how this transformation, especially when considering the deep transformation can be translated from its more abstract notion into something practically tangible, which was presented drawing from the leverage points concept (Blythe et al., 2018; O’Brien, 2011). Nonetheless, O’Brien & Sygna (2013) argue “the lack of a critical, integrated body of research on transformation is both surprising and disconcerting” (p.668). In their publication Blythe et

al. (2018) define five latent risks that can be encountered in the sustainability transformation discourse, engaging in a more critical analysis of this phenomenon.

1.3.1 Paradigms and Worldviews

Many scholars refer to the influential work of Kuhn (1962) who coined the term paradigm and paradigms shift with regards to the inherent differences within the social and natural science. Over the years the concept of paradigms as a bundle of values, assumptions and beliefs has penetrated various domains, and is too broad and nebulous to clearly delineate in this essay. As we already took broad inspiration from the systems thinking and leverage points sphere, we will define paradigms following D. Meadows (1999). She states: “The shared idea in the minds of society, the great big unstated assumptions – unstated because unnecessary to state; everyone already knows them – constitute that societies paradigm, or deepest set of beliefs about the how world works” (p.17). The supposed elusiveness is an interesting element, which in the quote above is emphasized by defining paradigms as “great big unstated assumptions”, scholars pointed out the potential existence of hegemonic paradigms. This idea draws on the conceptualization of hegemony, as introduced by Gramsci, an Italian political economist, who was imprisoned by the Mussolini regime in 1930. This notion is especially prevalent in the economic and political domains of sustainability science. Here for instance the economic growth paradigm is deemed as hegemonic as it obscures alternate possible economic paradigms which are not based on the imperative of growth (Göpel, 2016; Raworth, 2017). In a similar vein, within the political field, scholars argue that the ecological modernization paradigm has hegemonic tendencies, which render the search for solutions outside of the scope of catalyzing economic growth through technological advances. The danger they state of a paradigm becoming hegemonic is that the assumptions become defined as common sense, that is they remain unquestioned (Machin, 2019; Mol & Spaargaren, 2000).

In the following section, we would like to briefly review two paradigms, which have gained much attention when considering the human-nature relationship, seeing as we have already previously reviewed the analytical frame of social-ecological systems and the ice-berg model with its leverage points as a holistic depiction of occurring phenomenon’s within these social-ecological systems.

Overarchingly the two paradigms we would like to discuss here can be referred to as anthropocentric and ecocentric. These two seem the most relevant as they are the ones most often referred to within the Rights of Nature realm, which we will touch on in the next chapter. It should be noted that both these concepts in the first place could be plainly understood as points of reference, either from a human centered perspective or from an ecosystem perspective and are often pitted against each other (Bakari, 2019; Thompson & Barton, 1994). Here we use both as umbrella terms and attempt to flesh out respective predominant notions housed within them. It is important to note, that due to the vast body of literature we are unable to provide a detailed account. Moreover, there is a lack of clear theoretical delineation as often terminologies are used interchangeably (Kim et al., 2023).

The anthropocentric paradigm is often paralleled as seeing human and nature as two separate entities whereas the ecocentric standpoint enforces the human-nature connection. A core line within the parallelism of interpreting the human-nature relationship is the attribution of values, moreover the varying attribution of value to nature. Within the anthropocentric paradigm the attribution of value to nature is deemed as mainly instrumental. Whereas in the ecocentric paradigm the attribution of value to nature is intrinsic. In broad terms instrumental value of nature refers to it being valuable because of the use or pleasure which can be extracted from an interaction. On the other hand, nature perceived as valuable independently of the use or pleasure humans extract from it, is deemed as holding intrinsic value. The idea of either instrumental or intrinsic value has been criticized as a potential reductionist view of the concept of value within the human-nature relationship, this is what is often referred to as the relational turn within social science (Muradian & Pascual, 2018; Stålhammar & Thorén, 2019). Relational values emphasize the fact that the value derived from for instance nature depends on the individual relationship or the manner in which one relates to it and cannot be derived apriori, rather it is context dependent (Chan et al., 2016; Saxena et al., 2018). The dichotomous relationship of humans and nature presented within the anthropocentric paradigm possesses significant parallels with the human exceptionalism paradigm, both instruct a hierarchy of living things and put emphasis on the centrality of the human species (Kim et al., 2023). The ecocentric paradigm on the other hand is often paralleled with conceptualizations of the deep ecology theory as pioneered by Arnold Naess.

Interestingly, Davelaar (2021) takes on a more pragmatic approach, and inspired by the concept of paradigm shift of Kuhn (1962) argues, that the duality of these two paradigms are merely a transitional stage paving the path towards a paradigm change offering a new mode of thinking which isn't rooted within the dualistic conformity of either separated from nature or one with nature but rather introducing the concept of biomimicry where nature defines sustainability rather than humans stewarding nature.

2 Chapter 2: The Rights of Nature

2.1 A Brief Overview

Applying the legal personhood model to nature represents one practical aspect of a broader concept known as the Rights of Nature, a highly diverse school of thought overall concerned with attributing rights to nature or natural entities. Christopher Stone's essay "Should Trees Have a Standing? Toward Legal Rights for Natural Objects" (1972) is often considered the starting point for the theoretical discussion of rights for nature (Darpö, 2021; Tanasescu, 2022). Over time, various viewpoints have developed within this school of thought, which are not mutually exclusive. On the one hand, the legal-philosophical perspective highlights a paradigm shift from an anthropocentric to an eco-centric stance within legal frameworks. Another viewpoint is environmental constitutionalism, where the focus is on the inclusion of the discourse on the rights of nature in broad international and national institutions. A third viewpoint emphasises representation, highlighting the significance of legal standing for natural entities to strengthen environmental protection. Lastly, an often-stressed standpoint revolves around social justice, where the indigenous speaker position is underscored as a key element (Darpö, 2021; Espinosa, 2014).

Ecuador was the first country to ground these theoretical aspirations in a formal manner, namely embedding the rights of nature in their constitution in 2008. In the following years, the Declaration of the Rights of Mother Earth was presented and discussed at the United Nations, cementing the breakthrough into the global discourse. Following these advances, several non-governmental organizations established the Global Alliance for the Rights of Nature (GARN), with the aim of creating a network to advance advocacy. The United Nations has established a General Assembly titled Harmony with Nature, further institutionalising the Rights of Nature. An interesting recount of the diverging and rich notions

within the emergence of the rights of nature school of thought can be found in (Tanasescu, 2022). Central to the rights of nature is the often-mentioned strong relation to indigenous cultures, where the idea of attributing rights to nature is understood to better represent the relationship indigenous cultures have with their natural surroundings. However, reiterating this relation runs the risk of obscuring the diverse relationships indigenous cultures have with nature. It would potentially be more accurate to state, that indigenous cultures each incorporate their own understanding of rights of nature, rather than the other way around. Due to the diversity of viewpoints which have emerged over the years and the subsequent heterogeneous field of application cases around the world, the focus within this chapter is narrowed down to the representational angle of the legal personhood model. The representational angle offers an interesting perspective as it embodies the intersection of humans and nature. It pertains to the practical aspect of who has the right to represent the natural entity with its newly acquired rights (Tanasescu, 2022). Attributing rights to nature, is argued by some as a logical development, stressing a similar rights expansion, as has been done with marginalized peoples such as slaves and women (Nash, 1989). However, this argument ceases to obscure, that mere attribution of rights does not directly translate into these being honored, thus highlighting again the importance of representation. One intricate element in legal personhood models employed in the rights of nature is the declaration of representatives, a body in charge of representing the natural entity, this is also often referred to as guardians. In other words, it is crucial to examine how and if this "embodiment" of nature fits into the already existing structures shaping the aforementioned social-ecological systems. We follow Tanasescu (2022), who argues that a central vein to examining rights of nature is to think about it in the form of the political representation it unfolds.

We understand legal personhood³ to be: " a foundational concept of Western law. Legal persons are most often understood as those beings that hold rights and/or duties, or at least have the capacity to hold rights, under some legal system" (Kurki, 2023, p. 1). For the interested reader, Kurki (2023) provides an extensive account of the different approaches within the notion of legal personhood, highlighting both theoretical and philosophical foundations. Cycling back to Blythe et al. (2018) depiction of risks in light of sustainability

³ Throughout this thesis we will refer to this concept as: legal personhood status, legal personality, legal person, legal subject interchangeably

transformations discourse, one of them is considered as follows: "Insufficient Treatment of Power and Politics Threatens the Legitimacy of Transformation Discourse" (p. 1216). Which supports Tanasescu (2022) notion of the importance of understanding whether the legal personhood model in its practical application challenges the existing power relations, as he concludes rights of nature are inherently of political nature. Within the context of the Rights of Nature, one could perceive legal personhood for nature as the practical execution of attributing rights to the natural world - a tool in a toolbox. Referring to Stone (1972), who was concerned with achieving legal standing for natural entities, such as trees, following a pragmatic theoretical approach. Here, attributing rights of nature follows a natural line of succession in search of tools to counter the undervaluation of natural entities. This could be paralleled with the increasing attention monetary valuation of ecosystem services have gained, as an attempt to accurately reflect the value contribution of nature. Stone (1972) argues, "there is something of a seamless web involved: there will be resistance to giving the thing 'rights' until it can be seen and valued for itself; yet, it is hard to see it and value it for itself until we can bring ourselves to give it 'rights'..." (p. 456). This response is a pragmatic approach of leveling the legal playing field. The idea here is that we cannot have the enforcement of rights that do not exist in the first place.

2.2 Precedent Cases of Legal Personhood Attribution

Let us examine the concept of legal personhood within the right of nature realm a bit closer, by focusing on two cases, where natural entities were attributed the legal personhood status.

2.2.1 New Zealand – Whanganui River (Te Awa Tapua)

Around 1830, settlers arrived in New Zealand, culminating in the signing of the Treaty of Waitangi in 1840 between the Maori rangatira (chiefs) and the British Crown. The Treaty of Waitangi is considered as the founding document of New Zealand. However, this document was drafted in both languages and contained significant differences - only 39 Maori rangatira signed the English version whereas 500 rangatira signed the Maori (NZ History, n.d.). Over the years, many disputes emerged due to the different understandings of the implications of these two treaties. The lack of sovereignty for the Maori is central to these disputes (O'Sullivan, 2021). On the North Island, the Whanganui River (Te Awa Tapua), which flows from its centre

into the Tasman Sea, has been a central protagonist of such disputes. One central element of these disputes was the culmination of a long effort by the Whanganui Iwi to have their right of ownership of the river restored (Bieluk, 2020; Houart, 2022). With the Te Awa Tupua Act in 2017, it gained the status of legal personhood status after more than 150 years of disagreements between the Whanganui Iwi and the government of New Zealand. The Te Awa Tupua can be seen as a historical treaty settlement, calling into life a new office of Te Pou Tupua, comprised of officials of the Crown and Maoris, both parties jointly being considered the human face of the river. The Te Awa Tapu are supported by an advisory group, Te Karewao and the Te Kōpuka, a strategy group (Te Awa Tupua (Whanganui River Claims Settlement) Act 2017, 2017). Which collectively could be considered as a relevant governing body in relation to the Whanganui River, redistributing the previously unbalanced power relations (Tanasescu, 2022). Over the years, various activities have led to the continuous exploitation of the riverbed such as extracting of gravel, dredging for improved navigation, and ongoing drainage for electricity (Bieluk, 2020). However, the issue of environmental degradation is not central to the efforts of attributing legal personhood status to the Whanganui River. Instead of perceiving the attribution as a tool for environmental protection, the central aspect of the narrative is the empowerment of the Whanganui Iwi as representatives of the river. This idea is also reiterated by several scholars, such as Tanasescu (2022): “the issue of rights, as well as the idea of Nature, are much less prominent then the issues of ownership and authority” (p. 78).

2.2.2 Colombia – Atrato River

Chocó department in the northwest of Colombia is known for its biodiversity and many cultural influences. “Ethinc” groups make up the vast majority of the local residents in this region, with 87% Afro-descendants and 10% indigenous groups. 90% of the region's forests, along with a variety of ecosystems and the Atrato River's watershed, are protected. The mining activity in the form of artisanal gold mining, carried out by indigenous communities in the Chocó region, dates back to before the Spanish colonization. Starting in the 1500s, Spanish colonizers forced these indigenous communities and enslaved Africans to mine gold for the Spanish crown, making Chocó the largest gold producer. However, the generated profits did not belong to the region as most of the wealth was exported. After the independence from

the Spanish crown, mining remained the stark focus of the economic activity in this region. There are various forms of mining activities: artisanal mining, semi-mechanized mining (using motor pumps), mechanized mining (uses dredges and bulldozers but also toxic chemicals such as mercury and cyanide) and lastly mega mining (e.g. open pit mining). Both mega mining and mechanized mining are detrimental to the natural environment, although the latter is defined as more dangerous (Shapiro & McNeish, 2021).

Since the 1980s, there has been a proliferation of illegal mining in Chocó carried out by foreign actors and armed groups such as paramilitaries, cartels and guerrillas. Suárez & Aristizabal (2013) state that 87% of Colombia's gold mines have no mining titles, where Chocó in 2011 had the highest concentration of illegal mining activities with 99,2% registered Mining Production units having no mining licenses (Shapiro & McNeish, 2021).

Overall, this activity has had severe socio-ecological implications, spanning from food and water contamination, and to the elimination of livelihoods leaving no other choice but to turn to mining or engage in sex work (Shapiro & McNeish, 2021). The Atrato River's watershed has been contaminated with heavy toxins used in the gold mining process, which linger long after the mining ceases and thus will over a long period of time destroy habitats and lead to an abundant loss in biodiversity (Shapiro & McNeish, 2021).

Flowing along the occidental cordillera in the east of Colombia, the Atrato River became a legal person in 2016 through a judicial pronouncement after the filing of a tutela by the social justice research centre Tierra Digna. "The rulings were primarily issued as corrective measures to redress harms due to extractive projects, and as a mean to restore and protect ecological conditions that guarantee interdependent human rights" (Shapiro & McNeish, 2021, p. 155). The Court decided that the state and local community representatives would be co-guardians, as well as state officials who were ordered to be assigned by the presidency, furthermore plaintiffs had to elect local Guardians as representatives from various resident communities of the Atrato River. The Court also ordered a Panel of Experts to support the River Guardians ensuring their successful participation in processes.

Power imbalance remains a problem for implementing the co-guardianship between local residents and the state as it was envisioned to be a shared and equal power distribution committee. However, significant power imbalances have been illustrated (Shapiro & McNeish, 2021). For instance, the unequal funding distribution among elected government officials, who have defined means of funding allocation versus the local resident groups

subject to raising funds themselves. Moreover, disagreements among all the involved groups might lead to the absence of a unified vision for the way forward as a representation of the Atrato River. This is due to the large area this new mode of co-governing is supposed to span, covering over 40.000 km² of diverse ecosystems and lived realities previously isolated from each other. Overall, doubts are raised about the capability of this guardianship model to deter the governing parties from their economic growth agenda (E. J. Macpherson, 2019).

Furthermore, Rodríguez-Garavito et al. (2010) provides an interesting analytical lens on the context encountered within this space. Describing this context as social minefields, which are:

“are true social fields, characterized by the features of enclave, extractive economies, which include grossly unequal power relations between companies and communities, and a limited state presence. They are minefields because they are highly risky; within this terrain, social relations are fraught with violence, suspicion dominates, and any false step can bring lethal consequences.” (Rodríguez-Garavito et al., 2010, p. 5)

In this particular case, the level of danger and violence creates another barrier under which the Atrato ruling falls, where guardians are faced with a life-threatening position. Shapiro & McNeish (2021) argue, “Without significant political will and backing to support these defenders, increased visibility might also become matched with a security and economic deficit, essentially immobilizing and threatening effective action” (p. 169).

Due to the minimal meaningful alteration in the watershed area concerning existing governance and socio-ecological conditions, Shapiro & McNeish (2021) conclude there is potential whilst pessimistic outlook for the capacity to operate in view of the entrenchment within the present political ecology. This political ecology is primarily shaped by the Colombian government's determined pursuit of economic development, relying on the extraction of natural resources which leads to continuous environmental degradation and social threats, as illegal armed actors continue to dominate the entire Atrato River watershed.

2.3 Reflections on Legal Personhood

Having outlined the concept of legal personhood, situated as a practical element within the broader rights of nature school of thought, we turn to reflect on some critical considerations found within this concept. The ambiguous opinions in regards to appropriateness of legal personhood as a form of legal representation of nature, specifically in light of the paradox that rights of nature cannot be removed from humans, is amply discussed within this school of thought (Maffei, 2022). In 1984, Elder (1984) critiqued Christopher Stone's deep ecological approach to law. Although lengthy, the following quote illustrates the aforementioned thought:

“If it cannot matter to canyon or trees if they are irreparably damaged, how are their guardians to know what to argue on their behalf, other than by using their own values? Even if trees “want” less smog in the air, why would they want it? One answer might be to reduce biological strain and to allow the tree to grow bigger or produce more seeds. But equally, the tree could ask that other trees competing with it to be cut down for the same reason. Down with the survival of the fittest (and perhaps, implicitly, with wilderness)! Civilized trees, bears or deer might reasonably ask that they, like people, be protected from the dangers of the natural environment and be fed and watered by people through the long rigorous winter. As Sagoff comments: “Are labour saving conveniences only good for people? Environmentalists always assume that the interest of those objects (rivers, mountains, lakes and other natural things) are *opposed to development*. How do they know this? **Why wouldn’t Mineral King want to host a ski resort, after doing nothing for billion years? The seashore... indicates its willingness to entertain poor people .. by becoming covered with great quantities of sand.**” (emphasis added) .”(Elder, 1984, p. 289)

The aporia emerges from the fact that, as much as humans try, there is no removing oneself from oneself. Law remains a human construct, as it emerges within and through humans. As Serge Gutwirth argues, “granting rights to non-human entities may degenerate to an even bigger anthropocentrism indeed, only humans are able to translate nature’s “interest” into language.” (cited in (Bétaille, 2019, p. 56). In a similar vein, Kurki (2022) vigorously challenges the notion, that natural entities can be right holders. Looking closely at his argumentation, the criticism arising here is not necessarily targeting the practicality as such. Rather, he distinguishes between direct legal personhood and indirect legal personhood, arguing that the former will inevitably collapse into the latter, since non-sentient beings in his regard cannot be holders of rights. Nature as such is not the rights holder but is represented through a body of humans who are attributed to be the voices of this natural entity, therefore resulting in an indirect legal personhood. He draws this conclusion stating the confusion of legal personhood with the concept of legal platform. A well-known example, to which he refers to, is the legal personhood status of corporations, which is often used to illustrate the feasibility of attributing the legal personhood status to any non-physical entity. As he states “However, this analytical criticism of such direct legal personhood arrangements does not necessarily entail that such arrangements should not be adopted: they can still be justified as legal fictions with symbolic value.” (Kurki, 2022, p. 527). This symbolic value of legal personhood then might hold a great potential for political imagination (Campbell, 2005; Tola, 2018). Due to the fact, that rights can be used as a logical end to an argumentation chain. Tola (2018) notes “rights are that which we cannot not want” (p. 34).

Regardless of the symbolic value the legal personhood model can unfold, the crux of the legal personhood model exemplified here, draws back to the importance of understanding the representational mechanism evoked by it. In some form, it draws back to the notion of who is allowed to speak for nature and what views of nature are accepted, coming back to previously encountered problematic of a western-centric and economic growth hegemonic worldview as we must ask ourselves “which utterances can be put into circulation... Which are repressed... Which utterances does everyone recognize as valid, or debatable, or definitely invalid? Which have been abandoned as negligible, and which have been excluded as foreign?” (Foucault, cited in (Machin, 2019, p. 214). Therefore, it could be assumed that it is crucial to examine the mechanism of representation, namely the model of legal personhood attributed to a natural entity, and whether it is capable of alleviating the difficulties within the

intricate socio-ecological structures of our society that are already present, and effectively translate into a new mode of relating to nature, and allow for a multitude of ontologies to be seen and heard.

3 Chapter 3: Introduction of Case Study of Mar Menor

3.1 General Overview of Mar Menor

Mar Menor is the largest saltwater lagoon in Europe, spanning an area of 170 square kilometres located in south-eastern Spain, within the autonomous region of Murcia. It is bordered by four municipalities - Cartagena, San Pedro del Pinatar, San Javier and Los Alcázares. It is separated from the Mediterranean Sea by "La Manga", an ancient dune 20 kilometres long, intersected only by five points called "golas", natural channels connecting the



Figure 4: Satellite image of Mar Menor (Caballero & Roca Mora, 2022)

Mediterranean Sea to this unique ecosystem. To the south the basin is surrounded by the Cartagena mountain range (Sierra Minera) while the Torre Vieja anticline borders it to the north. Its crystal blue waters and tranquil surroundings, with around 2,800 hours of sunshine

a year, have attracted many tourists and new residents over the years. The mud in Mar Menor contains higher concentrations of calcium, magnesium and potassium compared to other saltwater lagoons, making it highly regarded for its therapeutic value.

The diverse landscape around Mar Menor is characterised by wetlands, dunes and beaches. Many of these areas, owing to their unique nature, are home to endemic species such as the fartet (*Aphanius iberus*), the sea horse (*Hippocampus guttulatus*) and the sabina mora. Mar Menor's economic activities primarily revolve around: urban-tourist developments, agricultural use, and fishing, whereas mining also played a role in the past (Conesa & Jiménez-Cárceles, 2007; Esteve Selma et al., 2016). In recent years, the lagoon has received international attention due to the severe environmental degradation it has suffered over the years.

3.2 Environmental Degradation

There is never a simple answer when trying to understand what causes ecosystems to become unbalanced, mainly because many of the processes are not visible until it is too late. In the case of the Mar Menor, the tipping point where the destruction of the ecosystem first became visible dates back to 2016, a phenomenon Murcianos refer to as "la sopa verde": due to an excess of nutrients in the water of the lagoon, an abundance of microalgae caused the lagoon to collapse, turning it into a green soup (Esteve Selma et al., 2016). This natural process is more formally referred to as eutrophication. Very succinctly put, eutrophication occurs when an enclosed water body experiences a large influx of excess nutrients, which in turn causes existing algae to grow exponentially, resulting in an algae bloom. In 2019 and 2021, the lack of oxygen in the water led to a mass die-off of fish and crabs in the lagoon; four to five tonnes of dead fish had to be removed from the lagoon. They are thought to be a secondary effect of the initial eutrophication of the lagoon. A closer look reveals a vast web of complex combinations of different factors that are damaging the delicate ecosystem of the Mar Menor

(Conesa & Jiménez-Cárceles, 2007). Ecologists and activists have been warning about the dangers and effects of pollution in the lagoon, but have fallen on deaf ears.

As already mentioned in the literature review such complex interplays can be better understood by framing them through social-ecological systems (SES, hereafter), a framework that highlights the relationships among social and natural integrated systems interacting through various spatial and temporal scales (Guaita-García, Martínez-Fernández, Barrera-Causil, & Carl Fitz, 2022). This allows us to allude to the complexity of the problem

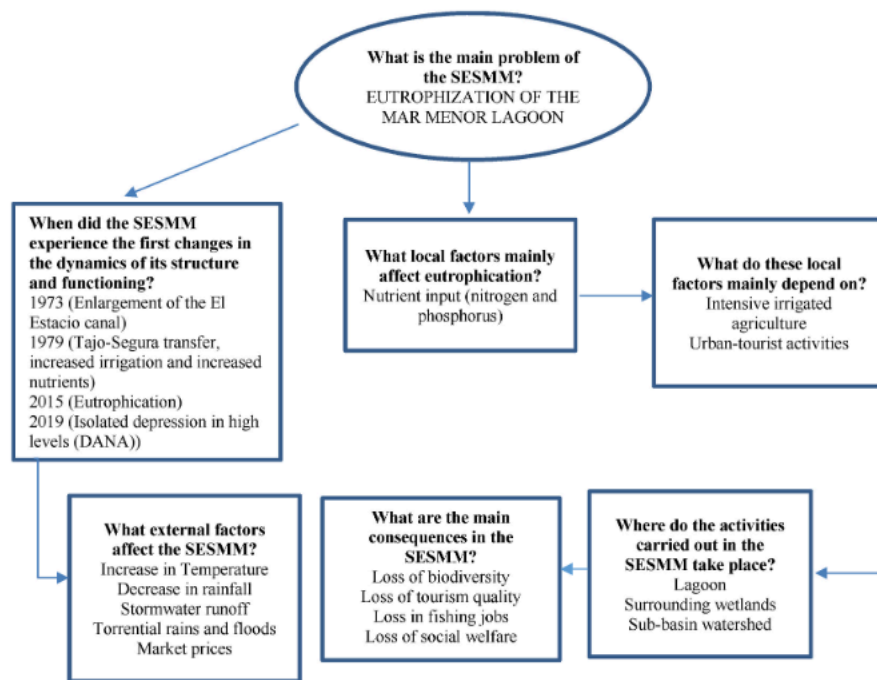


Figure 5: Social-ecological system Mar Menor (Guaita-García (2022):4)

encountered. There is no linearity in such systems as to state a simple cause-effect relationship but rather a complex network of interactions. Guaita-García, Martínez-Fernández, Barrera-Causil, & Carl Fitz, p. (2022, p. 4) developed a diagram that showcases the main issue observed in her study within the social-ecological system of Mar Menor (SESMM), namely the eutrophication of the lagoon (Figure 5). One finding was that there is a consensus among the stakeholders in this SES regarding the management measures, such as limiting the entry of nutrients to the lagoon. Moreover, concerns about tackling these environmental issues and calling for new initiatives towards a more sustainable development have been increasing (Guaita-García et al., 2021; Guaita-García, Martínez-Fernández, Barrera-Causil, & Fitz, 2022). We may infer from this that the seriousness of the environmental catastrophe existing in Mar Menor has reached various levels of stakeholders. Each one of these stakeholder classes can

be further subdivided into different groups within them. For instance, the public administration is represented by the central government in Madrid, the regional government in Murcia and the local administrations, four of which border the lagoon Cartagena, San Pedro del Pinatar, San Javier, Los Alcázares and three others are relevant due to their integration within the watershed: Torre Pacheco, Fuente Àlamo and La Unión. All of whom have different responsibilities. The agricultural sector, on the other hand could be further dissected into the international cooperations responsible for the export of goods and the smaller farmers selling to these large conglomerates. The aim here is not to dwindle these stakeholder groups into small entities but rather to keep in mind that they exhibit a certain amount of heterogeneity and are also subject to varying wants and needs. This is to keep in mind that when we now turn to examine two of the most referred to pressures, which have had a role in the current degradation state of Mar Menor, there are various layers to uncover. Within the stakeholder groups, the relationships amongst themselves; the other stakeholders and the environmental landscape.

3.2.1 One side of the coin: Agriculture

A widely acknowledged pressure on Mar Menor is the intensive agriculture in the surrounding catchment area (Conesa & Jiménez-Cárceles, 2007; Esteve Selma et al., 2016; WWF España, 2022). Agriculture in this part of Spain has been highly developed due to fertile soil and abundant sunlight throughout the year, making it one of the main producers in Europe (A. I. Lillebø et al., 2015). Water scarcity has historically been a limiting factor in this natural semi-desert landscape. During the early 20th century, this scenario changed with novel engineering solutions, such as the construction of large dams and water infrastructures. One of these constructions was the Tajo-Segura water transfer canal, inaugurated in 1979, which transports water from central Spain's water veins to the south. Rather than satisfying the previous need for more water, the new water supply led to more water being used in this region. Moreover, Fleskens et al. (2013) argue that this so-called inter-basin water transfer has led to an increase in the chronic water shortage in the region. This is due because, the new supply of water resulted in not only in the expansion of agricultural land but also the conversion of previously non-irrigation crops to leafy vegetables and crops in need of continuous irrigation. The irrigated area doubled between 1988 and 2009 (Carreño Fructuoso, 2015). The alteration of

crops brought about a shift in management practices, with contour ploughing being abandoned, ultimately leading to a change in the soil structure and increasing erosion. This in turn led to an increase of run-off of nitrates, pesticides, and fertilizers during rain events (Comité de Asesoramiento Científico del Mar Menor, 2017; Guaita-García et al., 2021). In addition, the increase in irrigation transformed the watershed, raising groundwater levels and providing a continuous waterflow into the lagoon (Velasco et al., 2006). A wide array of studies have been conducted examining the negative impact that the intensive agricultural sector has on the watershed and consequently Mar Menor (Conesa & Jiménez-Cárceles, 2007; García-Ayllón & Miralles, 2014).

The total estimated input of nutrients from agricultural origin is estimated to be 85% (Guaita-García, Martínez-Fernández, Barrera-Causil, & Fitz, 2022). For instance, figure 6 was taken from a publication by García-Ayllón & Miralles, p. (2014, p. 111) examining the environmental impacts of the transformation of Mar Menor's coastal perimeter. The environmental impacts of the transformation of Mar Menor's coastal perimeter are clear: the "ramblas" incoming agricultural impacts (such as fertilizer run-off) mainly from the left, and the ongoing urbanisation, widening the "golas" (here: communication canals) especially „El Estacio“ exerting pressure from the right. The groundwater catchment area, not depicted here, commonly known as the Campo de Cartagena watershed, also plays a significant role in the lagoon (Jiménez-Martínez et al., 2016). In general, the nitrate concentrations in the aquifers are four times higher than the limit value set by the Nitrate Directive (91/676/EEC) of 50 mg/l.



Figure 6: The various water courses entering Mar Menor. (García-Allyón (2014))

The idea that this ecosystem is slowly being encroached upon by external factors is alluded to in this graphic, which shows the pressures coming in from the left and right (Figure 6).

3.2.2 Another side of the coin: urban developments

The beauty of the lagoon has attracted tourists since the 1960s (García-Ayllón, 2015), with its 70 km perimeter of coastline promising a relaxing, joyful time in the sun. The economic boom in the last quarter of the 20th century, due to the agricultural intensification, tourist and industrial development made the region more desirable and in need of labour. Consequently, resulting in a residential expansion from both within Spain and developing countries. (Esteve (Ed.) et al., 2003). This influx of people was closely followed by urban development, producing



Figure 7: Images of "La Manga" 1950 and today. (García-Ayllón (2014)

a high population density in more desirable areas and lead to a vast transformation in "La Manga" (Figure 7). In Mar Menor half of all the hotels and 64% of the total coastal apartments are located on the coastline (Esteve (Ed.) et al., 2003). The tourism sector can itself be defined through residential tourism, leading to a large influx of the population during the summer months. For instance, in "La Manga" the population increases from a few dozen (thousand) to 250,000 people during the summer months (García-Ayllón, 2015). The figure 7 illustrates the vast transformation the urban development that took place in "La Manga".

The increase in the number of residents and tourists leads to two main pressures, firstly the discharge of wastewater and secondly the general urbanisation of the area with the development of more housing, structural infrastructures such as roads, ports, beach

formations as well as promenades. A pivotal moment was the dredging of the "gola" del Estacio in 1973 (see also Figure 6). This alteration did not just contribute to the rise of present boats and passengers, but also disturbed the composition of the lagoon, as more ocean water was able to enter. Eventually resulting in a "Mediterraneanization", (A. I. Lillebø et al., 2015) which is characterized by a levelling out of the average salinity of the lagoon: previously 45% more saline than the Mediterranean Sea while in 1972, the lagoon measured only a mere 20% saltier. Naturally, this change was also reflected in the composition of the flora and fauna, as many of the endemic species are adapted to the high salinity of the water (Comité de Asesoramiento Científico del Mar Menor, 2017)

All in all, Mar Menor has silently suffered severe consequences over the last century, which have only become visible to the wider population over the last decade. In the 21st century, economic prosperity based on short-term gains while extracting nature's services beyond limits is not a novel narrative, and Mar Menor is a prime example of an ecosystem visibly out of balance. The consequences are severe from a massive loss of biodiversity to a dwindling attractiveness to the tourism sector due to turbid waters and continuous algae blooms, loss of fishing jobs and overall social welfare (Guaita-García, Martínez-Fernández, Barrera-Causil, & Fitz, 2022).

3.3 The ILP (Iniciativa Legislativa Popular)

Within the University grounds of Murcia, the Law Clinic Course of 2019/2020 (Clínica Jurídica) instructed by Teresa Vicente Giménez, a Professor of Philosophy of Law, together with her students, conducted a study about the possibility of attributing Mar Menor legal personhood rights, in order to protect it from further degradation. Throughout this process, the Popular legislative Initiative is deemed to be a possible path to bring this idea to life.

A Popular Legislative Initiative is a political instrument that enables citizens to participate directly in the drafting of legislation, as enshrined in the Constitution (Article 87.3). As compared to other instruments of citizen governance, for example referendums, this method has restricted public participation. This is because the final decision regarding the implementation of the new law rests with Parliament (Vírgala Foruria, 2012). Due to the nature of the Spanish political system comprised of the central government and the autonomous regions, the Popular Legislative Initiative can be pursued by either a

governmental body in the autonomous region or the central government (INE.es, n.d.). The promoting commission, with Teresa Vicente Giménez at the forefront, decided to pursue the municipal route and, after a publication in the local newspaper, the City Council of Los Alcázeres supported this initiative and registered it on the 24th of June 2020. The following month, it was presented in front of the Regional Assembly by the Mayor of Los Alcázeres, after having been endorsed by more than 20 city councils in the region. However, it was denied by the Regional Assembly. This left the promoting commission no option but to attempt to get the ILP firstly approved by the Congress of Deputies of Spain. They managed to get it approved, enabling them to transition into the next stage. This stage consists of gathering 500,000 signatures supporting the legislation proposal in 9 months. Under normal circumstances the threshold of half a million of signatures already proposes a significant obstacle. The signatures hold specific requirements; only Spanish national citizens or residents in Spain, over 18 and with a valid ID, are allowed to sign. Moreover, all signatures must be collected in person. In 2020 and 2021, a global pandemic brought the world to a standstill, with public life and interactions nearly ceasing to exist for the time being. Having to collect in-person signatures during a time when everyone is avoiding larger gatherings, appears to be a nearly unattainable feat. Nevertheless, on the 27th of October 2021, the promoting commission presented 639,286 signatures to the Office of Electoral Census (Vicente & Salazar, 2022). As aforementioned, the Parliament is the last deciding entity on whether this law will ultimately be passed, and considering the immense effort it takes to get there, it is no surprise that only four other initiatives have been passed in the 40 years since this measure was implemented (Fernández Silva, 2023). In this case, the Spanish parliament on 30th of September 2022 voted almost unanimously (with the exception of the far-right party VOX) for the approval of the law, ultimately granting Mar Menor legal personality.

Taking into account the tedious, long and improbable path it took to get this new law into action, and the broad citizen mobilization, naturally the question arises: what already existing environmental protection instruments are in place that evidently are not working, or else this "radical movement" would not have been necessary. Furthermore, the outcome of this novel movement results amongst others in what could arguably be a new political body, embraced by the law, namely the Lagoon itself. Thus we now turn to the following section in attempting to gain a deeper understanding of the political angle, more prominently environmental protection governance already in place.

3.4 Environmental Protection Governance in Mar Menor

Let us now examine the relevant protection legislation that is in place for the Mar Menor area. We compiled legislation/policies from international and national and levels to provide a comprehensive picture. The table 1 displays relevant legislation on an international level.

Table 1: Environmental protection international legislation relevant for Mar Menor

Name	Type	Purpose	Origin	Source
Ramsar Convention (1994)	Multilateral agreement	Obligation of signing partners to designate wetland site of international importance; adaptation of “wise use” strategy; sharing and reporting on ecological state; establishment of non-compliance and monitoring mechanisms; enhance international cooperation	Global	(<i>Mar Menor / Ramsar Sites Information Service</i> , n.d.; Pérez López, 2023)
Habitats directive (1992)	Directive	Ensuring biodiversity through conserving of specific sets of habitats and operationalization of the Natura 2000 network	EU	(<i>The Habitats Directive</i> , n.d.)
Birds directive (1979)	Directive	Establishing listed species subject to conservation (vulnerability, danger of extinction..), regulation of hunting, killing or particular transport)	EU	(<i>The Birds Directive - European Commission</i> , n.d.)
Water framework Directive (2000)	Directive	“Framework for protection of inland surface waters, transitional waters, coastal waters and groundwater” ((Pérez López, 2023):27) until 2027	EU	(<i>Water Framework Directive - European Commission</i> , n.d.)

As some are compulsory to be adopted by the nations themselves, as per the European Directives, they also commonly reflect a broader course of action. Leading us to outline the mechanisms of protection that the above-mentioned legislation and policies translated into after all?

The cascade of laws and declarations takes its next stop in Spanish national law, which followed suit in 2007 by transposing both the Birds and Habitats directive into its legal

framework. The law 42/2007 regulates this in the articles 42 to 49 of the third chapter (Ley 42/2007). The responsibility is given to the autonomous regions to declare, with prior adequate procedure to inform the public, the LIC (Lugares de Importancia Comunitaria)⁴, ZEC (Zonas Especiales De Conservación)⁵ and ZEPA (Zonas de Especial Protección de Aves)⁶. Additionally, they are responsible for determining plans or management instruments as well as defining conservation measures to keep the places in a good condition. This can include regulating, contractual or administrative measures (Decreto n.o 259/2019). All of these protection mechanisms are managed or instrumentalized through the "Plan de gestión integral de los espacios protegidos del Mar menor y la franja litoral mediterránea de la Región de Murcia", which was only approved on the 10th October of 2019 (Decreto n.o 259/2019). Figure 8 is a graphic depicting the abovementioned plan (Murcianatural.carm.es, 2019). It is important to note that the List of LIC was already adopted in 2006, declaring 50 localities of importance in the Region of Murcia, six of which are located in Mar Menor and its surroundings. 24 areas were also previously declared ZEPA in the Region of Murcia, more importantly the Salinas y Arenales de San Pedro del Pinatar were already declared in 1998 (*Murcianatural - Especies de Interés Especial*, n.d.). In 2001, Mar Menor itself was declared a ZEPA ((Consejería de Agricultura, 2001, p. 7654).

There is no doubt that the shockingly long gap of more than 20 years between the declaration and the eventual drafting of the management plan is alarming. Such an extensive delay not only raises serious concerns but also serves as an unmistakable warning sign of systemic inefficiencies. The management plan stands as the anchor for the successful implementation of legislation, and the significant time lapse underscores a critical failure in ensuring timely and effective environmental governance. In addition, it is striking in the figure 8 that the sites to be managed under this plan do not include the surrounding land (which, as discussed in 3.2.1 , is most often in agricultural use). Recognising that ecosystems are transboundary, we would like to take a closer look at the cooperation/interaction between

⁴ LIC: Sites of Community Importance

⁵ ZEC: Special Protection Areas

⁶ ZEPA: Special Protection Areas for Birds

the management of land use in the catchment area and relevant environmental protection. There is a significant turn that can be observed in the legislative action, following the visible

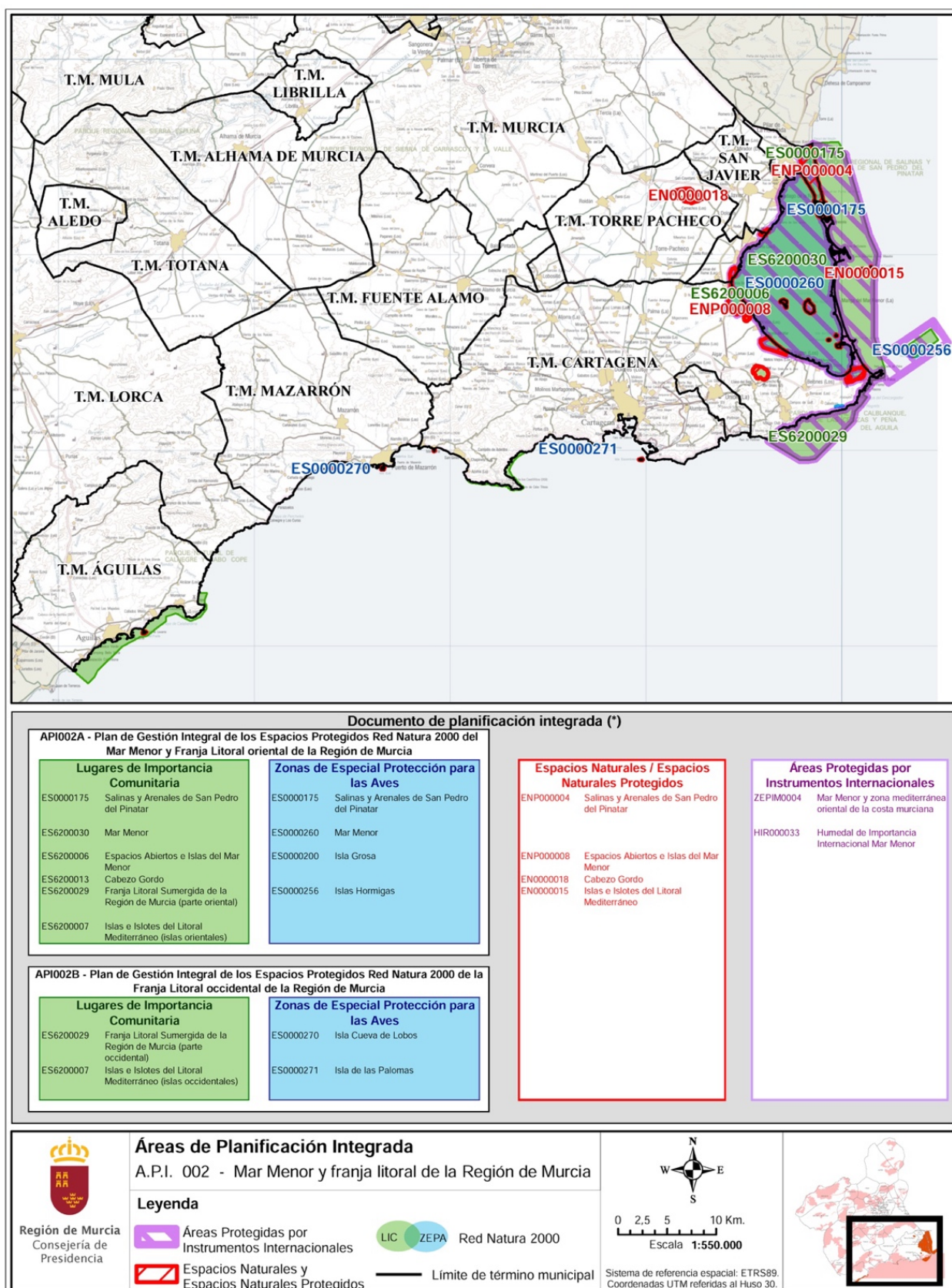


Figure 8: Plan integral de Mar Menor (Murcianatural.carm.es, 2019)

deterioration of Mar Menor. New laws to ensure its protection have been passed (see the IV de la ley 3/2020), as well as a number of newly established bodies relevant to manage and implement the recuperation plan (e.g. Oficina Técnica del Mar Menor).

On the national level in the last years there has been a significant progress on the proposal of new action plans. The Ministry of Ecological Transition introduced 21 policies in 2019 that affected various sectors (Pérez López, 2023), including control over the use of fertilizers. This involved calling into action various working groups, such as a Comisión Interdepartamental, Comité de Asesoramiento Científico, Comité de Participación Social, Comisión. In 2021, a Priority Activities Framework for the recovery of Mar Menor by 2026 was presented, with a budget of 484.42 million euros, and focused on short- and medium-term policies (Ministerio para la Transición Ecológica y el Reto Demográfico, 2022; Pérez López, 2023). The policies aim to address flood risk and land management, the implementation of a green-belt, ecosystem restoration as well as strengthen the existing legislation. A new drive to enforce the European directive of reducing and preventing nitrate pollution from agricultural origins was pursued. Furthermore, long-term strategy is being developed until the year 2050 (Ministerio para la Transición Ecológica y el Reto Demográfico, 2022).

Since regulatory competences are distributed at a national and local level, parallel forms of taking action emerge in an attempt to mend the ecological destruction of the Mar Menor. The government of Murcia developed an integrated management plan for the areas of Mar Menor, making Mar Menor and its surroundings Special Areas of Conservation. Moreover, in 2020 the Law for the Recovery and Protection of Mar Menor was adopted by the Regional Assembly (Ley 3/2020). The goal is to maintain the lagoon in a good environmental status and introduce urgent measures to aid a quick recovery. This is envisioned by adapting a tight execution timeframe to bring the land management plan for the watershed into an action. The execution of this quick approval failed as the hired company to execute the plan and establish a natural filter in the surrounding area, was suspended in January 2023 (Pérez López, 2023). It must be noted that this account of relevant legislation is not exhaustive, it is beyond the scope of this essay to give a full account of every relevant legislative motion passed. The objective is to provide an overview, as well as substantiate the argument that Mar Menor is protected by existing legal frameworks in place at different governance levels.

3.4.1 Limitations of legislation (Where does legislation go wrong?)

In light of the aforementioned plethora of policies that have evolved into concrete legislation across various levels, the concerning ecological state of Mar Menor prompts inquiry into the apparent disconnect of envisioned outcomes of environmental legislation and the actual impact they unfold. Several authors have asserted that previous legislation and management plans have failed to shield Mar Menor from degradation (Eröstate et al., 2020; European Commission, 2022; Garcia-Ayllon, 2018; Perni et al., 2020). The European Parliament's Committee of Petitions, after being requested multiple times by local NGOs, conducted a two-day fact-finding visit to gather first-hand information on the environmental issues affecting Mar Menor and determine means to combat them (European Commission, 2022). The final remarks after meetings across various stakeholder groups - such as the petitioners (composed mostly environmental NGOs), national, regional and local authorities, social organizations, business and trade union organizations and scientists - highlight the need for that "all stakeholders to act immediately and in a coordinated manner..." (p. 62) and again "concrete, coordinated and urgent actions are needed to solve most outstanding problems related to the degradation of the Mar Menor" (European Commission, 2022, p. 62).

The question remains: where exactly do the problems lie? To the best of the author's knowledge, there are no studies that have looked in-depth at the shortcomings of the legislation specifically in relation to the Mar Menor. Whilst the European Commission's report provides a list of possible measures to both the national, regional and European government, it does not go beyond recommendations. For example, one recommendation states "Engages the Spanish competent authorities to put an end to agricultural and livestock discharges into the Mar Menor by implementing specific measures to:..."(p. 63). How come these measures had not been implemented in the first place? And what will ensure that these recommendations will be translated into action? It is curious that scientifically the deterioration of Mar Menor comes as no surprise (Perez-Ruzafa et al., 1991). Nonetheless, it seems as if this knowledge of the imminent threat that Mar Menor was under has not been able to transcend from policy into political action. The figure 9, taken from Eröstate et al., p. (2020, p. 13), suggests possible answers for these questions. Within this figure 9 there are identified gaps (depicted as the rectangles), which cascade through the various institutional levels which could potentially be of relevance to the occurrences in Mar Menor. As depicted,

one of the sources could be the interplay of insufficient knowledge on groundwater ecosystems, which might yield in a lack of specific management policies. These could in turn result in the absence of specific management and ultimately in a lack of involvement from local stakeholders.

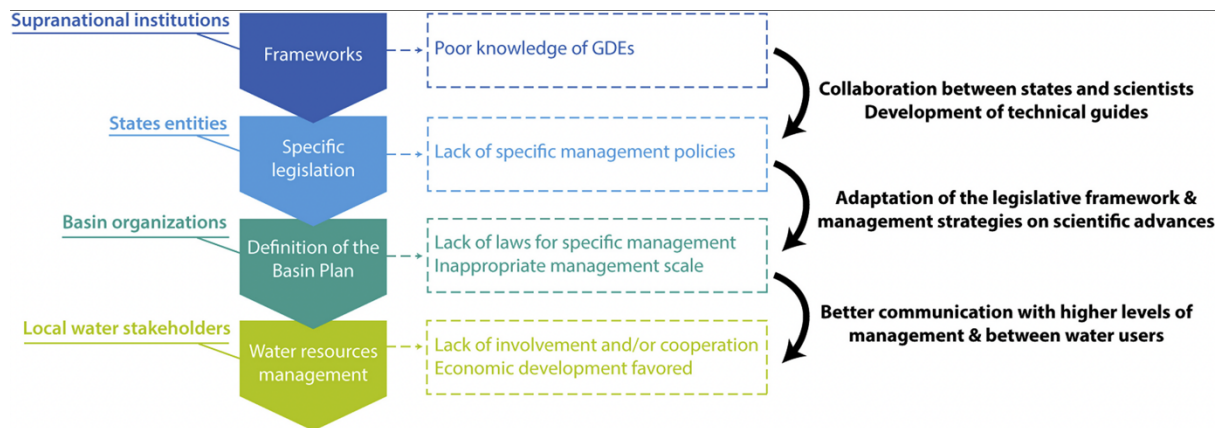


Figure 9: Illustration of identified gaps within the different governance levels (Erostate 2020a)

Considering again the Plano Integral of Mar Menor, with its depiction of Natura 2000 protection sites, many sources claim that intensive agriculture is one of the main culprits (Velasco et al., 2006). However, the surrounding area, mostly used for agriculture, is not considered within the plan, as only the lagoon itself is considered a protected area. Could one then consider the recommendation "Urges the European Commission to monitor whether the Spanish authorities set sufficiently detailed and quantified conservation objectives and the necessary measures to comply with the Habitats Directive and nature conservation in the Mar Menor area" (European Commission, 2022, p. 67) as not hitting the core issue, as potentially the Natura 2000 framework in itself does not adequately encompass the lagoon's characteristics resulting in reductionist protection mechanisms? In a major literature review, The ecological effectiveness of the Natura 2000 network, five recommendations were made. In a similar vein as the argument above, they state: "The ecological effectiveness of Natura 2000 sites depends not only on conservation measures within the sites, but also on non-conservation activities within the site boundaries and on land-use decisions outside the sites and in buffer zones. (...) Policy is therefore recommended to focus more on establishing effective buffer zones and semi-natural habitats outside protected areas, as well as ensuring adequate levels of protection within sites" (Evans, 2014, p. 24). Now considering the surrounding zones are not represented within the management plan, as shown in the figure

8 this doesn't mean that they are not adequately managed through other legislation. Nonetheless Evans (2014) also highlights the need for a more coherent approach within different policy areas (p. 23). Often the competition between the different sectors, such as the in this case conservation of Mar Menor and the flourishing of the agricultural business sector, has the power to jeopardize effectiveness (Evans, 2014). This point is also emphasized by A. Lillebø (2014) stating: "There is a lack of clear administrative responsibility for the implementation of coastal lagoon management and an absence of commonly agreed objectives and timeframes in which these objectives should be achieved. A better coordination of the work of the authorities involved in the management of the lagoons is recommended" (p.22). Following this we can make two preliminary assumptions: the lack of systemic legislation, both considering the physical context and its legislative context, could possibly be described as an inherent problem in this context. A resultant or an additional challenging element could be the lacking application of the legislation through responsible bodies. This is again highlighted in the previously mentioned Mission Report; they state: "Despite a number of adopted decisions, implementation is lacking in quite a few cases, while in others there is a notable lack of coordination, so that not all the proposed measures are compatible with each other, (...)." (European Commission, 2022, p. 62).

Returning back to the successful popular legislative initiative to make Mar Menor a legal person, we wonder what is this novel mechanism is and what it is envisioned to tackle within the complex issues encountered?

3.5 Mar Menor and the Legal Personhood Model - Law 19/2022

When considering the legal personhood model in Mar Menor as envisioned to embody a new form of environmental protection by its proponents Vicente & Salazar, it is useful to examine the final legislation piece, Act 19/2022, in more detail to gain a deeper understanding of the present case of attributing legal personhood status to Mar Menor. In its preamble, two important things are stated: on the one hand the twofold reasons for the approval of this act and on the other, the effect this will have. As for the stated reasons, the authors recognize the "serious socio-environmental, ecological and humanitarian crisis affecting Mar Menor and the inhabitants of its coastal municipalities "; on the other hand, "the inadequacy of the current legal system of protection, despite the important regulatory figures and instruments that have been introduced in the last twenty-five years"(Act 19/2022 p.1). The overarching goal or effect stated in the text is as follows: "The recognition of the Mar Menor and its basin as a legal person will allow autonomous governance of the coastal lagoon, understood as an ecosystem worthy of protection itself, a legal novelty that enhances the treatment given up to now: the lagoon, goes from being a mere object of protection, recovery and development, to be an inseparably biological, environmental, cultural, and spiritual subject." (Act 19/2022 p.3).

The law is divided into seven articles, which form the basis for the granting of legal personality to the Mar Menor. They will be briefly discussed in the following section.

3.5.1 Article 1.

Defines the area of Mar Menor to be recognized as a legal subject. Precisely, the entity to be granted legal personality is the Mar Menor basin, encompassing 1600 square kilometres. The exact borders of the biogeographical unit are not precisely defined here, but rather loosely described. For instance following delineation states that it is "composed of a large inclined plane of 1600km² in a northwest-southeast direction, bounded to the north and northwest by the last eastern foothills..." (p.3). Furthermore, it includes the drainage networks and water basin, as well as four aquifer groups: the Quaternary Pliocene, Messinian. Last but not least, the marine intrusion from the Mediterranean was also taken into consideration. Succinctly put, all possible water- or drainage pathways were taken into consideration.

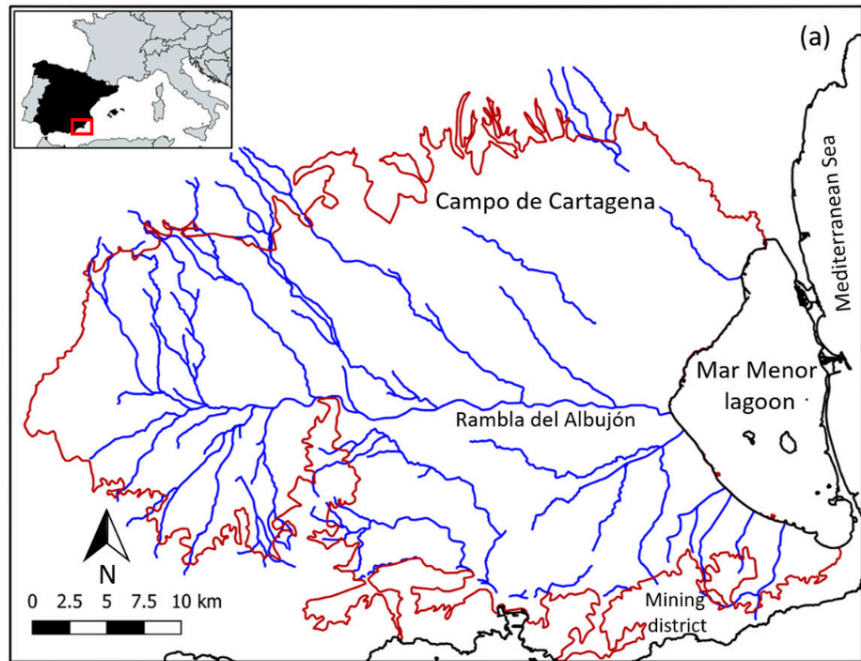


Figure 10: in red Quaternary aquifer around Mar Menor (Alcolea et al., (2019)

The definition of the aquifer groups is particularly interesting as they extend significantly underground, explaining the discrepancy between the size of Mar Menor as a legal entity (1600km²) in comparison to the lagoon itself, which spans an area of 135km² (see figure 10), illustrates the contour of the Quaternary aquifer as demonstrated by (Alcolea et al., 2019).

3.5.2 Article 2.

This article articulates the rights of Mar Menor, which are divided into four points:

- I. "Right to exist and evolve naturally"
 - a. This text explicitly states the following "The Mar Menor is governed by a natural order or ecological law that enables it to exist as a lagoon ecosystem and as a terrestrial ecosystem in its basin" (p.3), moreover stating that "the right to exist implies respect for this ecological law, in order to ensure the balance and regulation capacity of the ecosystem in the face of imbalance caused by anthropic pressures coming mainly from the catchment area" ((Act 19/2022 p.3-4).
- II. "Right to protection"
- III. "Right to conservation"
- IV. "Right to restoration"

One overarching question is to which state or baseline of the ecosystem the authors/authorities are referring to, especially when considering the right to restoration and conservation as these actions most often imply a desired state to be reached with these interventions. Moreover, from what point does the right to evolve naturally following the ecological law commence? In what manner can a severely degraded ecosystem, follow this ecological law and what determines or defines an evolving naturally?

3.5.3 Article 3.

Within this article, the representative bodies of Mar Menor are delineated. Overall, three entities are defined as representing Mar Menor, and they are illustrated in table 2.

Name of Committee	Members	Functions
Committee of Representatives	Three members from General State Administration, three members from the Autonomous Community, seven from the Promoting Commission	Propose actions for the protection, conservation, maintenance and restoration of the lagoon, supervise and control compliance with the rights
Monitoring Commission (Guardians)	Representative and alternate of each of the coastal municipalities appointed by the respective town councils (Cartagena, Los Alcázeres, San Javier, San Pedro del Pinatar, Fuente Álamo, La Unión, Murcia and Torre Pacheco) and of following sectors: business associations (organic and traditional livestock farming and agriculture), environmental and social NGO/associations	Monitoring and control of respect to the rights of the lagoon, periodic information on compliance of the law (with specific account to the indicators drawn up by the scientific commission)
Scientific Commission	Scientist and independent experts specialized in the study of the Mar Menor.	Advising both the representative and monitoring commission. Identifying indicators on the ecological health of the ecosystem, potential risks and measures of restoration

Table 2: Description of Committees as defined through law 19/2022

3.5.4 Article 4 & 5

The following two articles are so concise that it is worth including them in their full extent, both defining prosecution and punishment measures. They state: "Any conduct that may violate the rights recognized and guaranteed by this Act, by any public authority, private law entity, natural person or legal entity, shall give rise to criminal, civil, environmental and administrative liability, and shall be prosecuted and sanctioned in accordance with the criminal, civil, environmental and administrative regulations in their respective jurisdictions " (Act 19/2022 p.5). Article 5 in a similar vein states "Any act or action of the public administration that violates the provisions contained herein shall be considered invalid and shall be subject to administrative or judicial review." (Act 19/2022 p.5).

3.5.5 Article 6

Article 6 provides the legal basis for any individual (natural or legal person), therefore regardless of their nationality to come forward and invoke the rights of Mar Menor on its behalf, with all costs possibly to be recovered.

3.5.6 Article 7

Finally, in Article 7 lays out following five obligations for the Public Administrations at all territorial levels:

1. "To develop public policies and systematic actions for prevention (...)."
 2. "To promote social awareness campaigns on the environmental dangers (...), as well as educate on the benefits that its protection brings to society. "
 3. "To carry out periodic studies on the state of the Mar Menor ecosystem (...)."
 4. "To immediately restrict those activities that could lead to the extinction of species (...)."
 5. "To prohibit and limit the introduction of organisms (...) that could permanently alter the biological heritage of the Mar Menor."
- (Act 19/2022 p.5).

4 Chapter 4: Methodology

4.1 Research Question

The overall theme of this research project may be better grasped through a problem-solution axiom. By focusing on the serious degradation of Mar Menor and the emergence of the nature rights movement in Murcia/Mar Menor as a response, the core objective of this research is to examine what the participants' understanding of the problem is and why implementing the new law is the chosen solution. It should be noted, due to the complexity of the issue encountered, we have to limit the scope of our focus in relation to our understanding of the problem. The literature review within our case study showed that an extensive body of literature exists studying the socio-ecological causes which have created a fertile breeding ground for environmental degradation in Mar Menor. However, we perceived a potential gap in relation to understanding the paradoxical encounter of a natural entity with a large body of environmental protection legislation in place, and yet its ecological state alludes to the potential conclusion that this has not been effective. Concentrating on the legislative protection from a problem perspective suggests to be a suitable focus for this exploratory study, given the attribution of the legal personhood model as the solution. This is operationalized in the formulation of the following two research questions, where the first attempts to encompass the problem axiom and the second the solution axiom.

- I. What are the reasons of environmental protection legislation not being effective in Mar Menor as understood by the participants?
- II. How is the new law 19/2022 (granting MM legal personhood status) understood to be a better solution for environmental protection legislation?

4.2 Research Design

This research is embedded within an interpretivist notion, considering reality a socially constructed phenomenon (Bryman, 2018). Rooted within this notion, a qualitative approach allows a deep appreciation of individuals' understanding and experience (Bryman, 2018; DiCicco-Bloom & Crabtree, 2006). Given the centrality of understanding participants'

perspectives on the problem-solution axiom, opting for one-to-one semi-structured interviews was considered the most appropriate data collection method. This method allows for a great variability and participant-centred data collection and has been widely used in qualitative research designs (DiCicco-Bloom & Crabtree, 2006). Semi-structured interviews consist of an interview guide with fixed, open-ended questions, that cover different concepts or issues considered to be relevant. This question guide can be considered a conceptual arch, however, the researcher is not tied to the only exploring the fixed questions but is able to pursue a new and emerging line of inquiry during the interview, which is particularly useful in an explorative context. Due to the fluidity of the semi-structured interviews, a deeper understanding of the participants can be fostered, as it encourages a sense of reciprocity between the interviewer and interviewee (Galletta, 2020). This helps to generate rich insights into the research question as well as the emergence of prior unknown potential leads.

Different to quantitative studies, where the participant selection process requires standardization and a random selection to ensure scientific integrity, in qualitative research the subject selection is purposeful (Sargeant, 2012). Therefore, participants were selected on following premise: having been involved in the drafting of the law 19/2022 or having been involved in the signature collection process for the ILP (or the overall ILP process) or working for a governing entity in the region of Murcia or being a professor in law or lawyer in the Region of Murcia. We delineated the Region of Murcia as a limiting factor, to limit the scope to people who live in proximity to Mar Menor. The purpose of choosing these factors as a guide to the participant selection are as follows. First of all, the aim of the study is to reflect on the new legislation, due to its novelty it seems appropriate to focus on the origin, namely the individuals who drafted the law and the ones who actively participated in the ILP process, for instance: in gathering signatures. The rationale for including lawyers and governing officials was to be able to comprehend their perception of the new legislation, as they hold relevant expertise on how previous legislation was implemented and or the impact this new legislation can unfold. Moreover, the participant location was deemed relevant to be located around Murcia or Mar Menor to make sure they are familiar with the context. For individuals in governing positions and lawyers, we extended this to Madrid government and the European

government, as well as we wanted to gain an understanding what their views are. Although it wasn't possible to schedule an interview with individuals, outside of the Murcia Region⁷.

The identification of participants can be divided into two different approaches: first, the online investigation to decipher central figures and gain a preliminary scope, and then the identification of future interviewees through the interviewees themselves. The aim was to discern one to two individuals and schedule an interview during the first visit to Mar Menor/Murcia. Later, new potential participants were to be discovered through the interviewees and subsequently to be interviewed in the second field visit. The second site visit was not able to be completed due to financial restrictions. As a result, the interviews were transitioned from in-person to remote. This will be touched on in more detail in the following section. The rationale for dividing the process up into two segments was to ensure that participant selection was not solely limited to and reliant on internet research but rather informed by the individuals themselves. They may potentially hold information which is not retrievable through a thorough internet search. Furthermore, scholars suggested the overlapping nature of the different stages of participant selection, data collection and analysis within qualitative studies (DiCicco-Bloom & Crabtree, 2006) and commonly the absence of a predetermined sample size (Sargeant, 2012). Moreover, the sample size is often deemed as sufficient, when no new concepts are discovered within the data analysis, also coined the point of data saturation, highlighting the concurrence of the different phases within the research study.

The initial identification of participants occurred during the initial phase of investigation, through various news outlets and articles. All of them were contacted through e-mail. The field visit to Mar Menor/Murcia took place on the 21st to the 29th of April of 2023, with three scheduled interviews. In total we conducted 10 interviews over the course of 8 months, with relevant participants. The interview period was extended multiple times, due to the fact, that scheduling remote interviews, proved to be more difficult than anticipated with relevant interviewees.

⁷ A table of interviewees was not included in order to honor the anonymization.

4.3 Data Collection

As described above, the interviews were conducted both remotely and in person, leading to variations in the overall setting. During the week spent in Murcia, five interviews were conducted. While the anticipated interview duration was one hour, strict enforcement was not prioritized; instead, it was adapted to the time constraints of the interviewees. Overall, the interviews lasted approximately from 30min to 1h20min. To facilitate the process for the in-person interviews, the interviewees were allowed to choose the meeting place, aiming for convenience and their comfort. This resulted in the interviews being conducted in offices or casual settings such as cafes and ice cream parlours. The only consideration made at the outset of each interview was the ambient noise, ensuring optimal recording quality.

Remote interviews were predominantly conducted via Zoom, utilizing its call recording feature. Notably, remote interviews differ significantly from in-person interviews, as the internet connection can lead to disruptions in the conversation. Moreover, the absence of direct eye contact on a screen can sometimes pose challenges in establishing a comfortable atmosphere. Given the non-sensitive nature of the Mar Menor topic, which does not require emotional openness, this limitation was not pronounced. Nevertheless, an effort was made to simulate eye contact by speaking into the camera, thereby enhancing the natural feel of the conversation. Additionally, the background noise was minimized and the visual background was ensured to be non-distracting, typically against a white wall.

In terms of the interview's structure, all interviews adhered to a consistent format. Initially, greeting the interviewee by a brief introduction of the research topic and expressing gratitude for making time. Furthermore, the option to conduct the interview in either English or Spanish was offered. All interviews were conducted in Spanish, a language the researcher is able to comprehend and speak proficiently. Prior to delving into the subject matter, permission to record the interview was sought, explaining its necessity for subsequent transcription and analysis. Each interviewee signed a consent prior of after the interview. For the in-person interviews the voice recording app on the researcher's iPhone was used to record. This was the only recording device, as there was no other available. This is subject to risks, as malfunctions could result in the research data to be lost. During the remote interviews, it was possible to create a back-up recording with another device, as Zoom allows recording on the laptop and the iPhone can be used as a back-up. Nonetheless, there was no

malfunction, and all recordings were successful. Without exception, all participants agreed to being recorded. Afterwards, the interview was initiated with an opening question, inviting the interviewees to share details about themselves and their relationship/ties to Mar Menor. While allowing the conversation to flow organically. The question guide served as a tool to direct interviews, but emphasis was placed on allowing interviewees to express themselves freely, interjecting to seek clarifications or pose additional open-ended questions (see Annex A).

4.4 Reflecting on Data Analysis

Thematic analysis, recognized for its suitability in exploring topics and identifying latent patterns, is frequently applied in the analysis of semi-structured interviews and was therefore chosen (Cernasev & Axon, 2023). Braun & Clarke (2006) extol thematic analysis for its flexibility not being inherently bound to a particular framework, making it accessible to young researchers (:9). More precisely, the data analysis consisted of six steps guided by the comprehensive framework provided by (Braun & Clarke, 2006). It is briefly outlined below and guided the analytical process.

1. Familiarising yourself with your data
2. Generating initial code
 - a. inductive
3. Searching for themes
4. Reviewing themes
 - a. Thematic map
5. Defining and naming themes
6. Producing the report

Trint, a web-based, AI-powered transcription software, was used to generate a text format of the interviews. Whilst recognizing the potential limitations of using tools for transcription as it can inhibit the data familiarization phase (Braun & Clarke, 2006), through the pragmatic application of Trint, not as a transcription tool per se but as a text generator to avoid lengthy typing, the use was deemed appropriate as transcribing interviews is often referred to as a very time intensive process (Lapadat, 2000; McMullin, 2023). Following DiCicco-Bloom &

Crabtree (2006) who argue "the experience, discipline and expertise of research teams remain the essential ingredients for excellence in qualitative research analysis. Software programs do not analyse data, but they can be a tremendous aid in data management and the analysis process." (p.318-319). Subsequently, the generated draft allowed for comprehensive document editing: thorough proofreading whilst concurrently listening to the audio, rectifying any discrepancies, getting familiar with the content all the while applying the chosen transcription style⁸. In line with an intelligent verbatim transcription approach, elements such as stutters, pauses and word repetitions were excluded, while inaudible segments or phrases were highlighted and transcribed to the best of abilities. In alignment with Ochs (1979) who noted "transcription is a selective process reflecting theoretical goals and definitions"(p.44) it is imperative to approach the employed transcription style intentionally with regards to the research question (Lapadat, 2000). For instance, despite the potentially additional rich data, considerations such as tone and emotions were not considered in the final transcription as an attempt to limit the scope of the analysis. Braun & Clarke (2006) describe the "analytic process involves a progression from *description*, where the data have simply been organized to show patterns in semantic content, and summarized, to *interpretation*, where the attempt to theorize the significance of the patterns and their broader meanings and implications"(p.13). Moving from the *description* to the interpretation perspective, the researcher's field of vision influences the way transcribed interviews are coded and analyzed (Braun & Clarke, 2006). Given the novelty of the phenomenon, an inductive coding strategy was deemed most appropriate. The main objective of employing the inductive approach (Braun & Clarke, 2006 refer to this as an inductive thematic analysis) is to enable the discovery of research findings through the identification of prevalent, dominant, or noteworthy themes present in raw data, free from the constraints imposed by structured methodologies (Thomas, 2003). Another consideration to be made when describing the "researchers field of vision" is the level of exploration where attention is focused on the semantic content of the text without delving extensively into implicit meanings. This approach avoids reading between the lines, a practice which, while intriguing, could unduly broaden the scope of the research.

To generate the initial code, a qualitative data analysis software with AI capabilities named ATLAS.ti was used after purchasing a six-month license. It facilitated the organization

⁸ All interviews were transcribed and analyzed in Spanish.

and coding of transcribed documents, allowing simultaneous listening to interviews when needed. All relevant content related to the research question was coded, and overarching themes were subsequently defined. To better visualise the content whilst going over the coding process a second time, MIRO, a web tool allowing users to create a visual workspace, was used to create a thematic map, akin to Braun and Clarke's conceptualization. The central themes identified within the interviews served as the core of the map, each branching into smaller sub-themes, accompanied by direct quotations for reference. The thematic map proved instrumental in contextualizing elements of the interviews, establishing connections between themes and concepts. Upon the full integration of all interviews into the mind map, a detailed study was undertaken to finalize the definition and classification of themes, laying the groundwork for addressing the research question in step five. Step six is executed in the results/discussion section.

5 Chapter 5: Results, Discussion and Reflection

This next section will present the results of the qualitative research conducted. Due to the nature of the research questions, which are framed within a problem/solution angle, we will first present the findings⁹ on what the participants believe the reasons are that render environmental protection ineffective. Secondly, we will present the participants' rationale as to how they believe the new law 19/2022 is a better solution for the environmental protection of Mar Menor. It is important to note, that the emerged themes are not strictly related to the interviewees themselves. On the one hand, we would like to refrain from illustrating this link to keep the promise of anonymization. On the other hand, defining such rigid boundaries would defeat the purpose of this endeavour as the point is not to reiterate who said what but rather gain an understanding of what assumptions and ideas emerge from within the varying interviews. Most participants could be grouped into one of the themes; however, some stand in-between. Refraining from imposing this binary and rigid boundary approach we are able to consider the oscillating notions enriching the findings and thus attempt to capture the participants perception in a more holistic manner.

⁹ It is worth noting that the findings are enriched with quotes from participants where they were deemed relevant. The full transcripts are not included in the appendix because of the promise of anonymity and the fact that the full transcripts would reveal too much information about the interviewee.

5.1 Participants Perception of the Problem

5.1.1 Overarching: Legislation not functioning

All participants state having a close relationship with Mar Menor, having grown up with its pure crystalline waters and an abundance of seahorses. They express the magnificence of this ecosystem and the detriment of its present state: *"my paradise has been destroyed"* A1. Participants state that the uniqueness of cultural and environmental heritage established in Mar Menor is recognized by international environmental protection frameworks such as, for example Natura 2000 and the Ramsar Convention: *"Because the truth is that in these past 20 years Mar Menor has accumulated international, national, European and local protection figures and it has been getting worse and worse."* B2. That these and other legislative protection mechanisms have failed to protect Mar Menor is stated by all participants: *"In fact, if the laws that were already in place had been complied with, what has been allowed would not have been allowed.."* B3; *"the legal mechanisms of the Natura 2000 Network are not working"* B1.

5.1.2 Political structures

Most participants state that the reason for environmental legislation not being effective is the inaction of relevant political parties. They consider that the existing environmental legislation could have been potent, if enforced, but lacked the latter. Considering the protection status of a Natura 2000 and Ramsar site, most participants blame the responsible administrations for failing to execute their functions of applying, carrying out and, if needed, enforcing existing regulations. This is mentioned by various interviewees: *"The environmental problem stems from the government of the region... it is neglecting its functions. In fact, if it had complied with the laws that were already approved, it would not have allowed what has been allowed"* B3 and *"so it is the double function that the administration has, that of first doing my part and then the one who has to make a change has to comply with a rule, has to prosecute him if he doesn't comply and force him to comply. And it's not doing neither."* A2.

The issue of the lack of enforcement is echoed by yet another participant: *"Prior to 2017/2016 when the first episode occurred. There was legislation that could have been enforced or should have been enforced more rigorously by all three administrations.."* C3. An additional nuance is brought by another interviewee, who emphasizes the idea of

performative concern by the administration stating: *"The politicians who say with their mouths we are going to save the Mar Menor, however they don't control, they don't apply the laws of the Natura 2000 Network, which are the most powerful laws there are."* B1.

Participants argue that economic profit is the primary objective pursued by politicians: *"The political will is to generate wealth."* C2. One participant mentions that, the Region of Murcia before exploring this economic development was a poorer region (A1). This trend or overarching objective is often referred to by interviewees as an economic growth model employed by politicians which they characterize as generating fast profits. Environmental concerns about Mar Menor take a back seat. One interviewee states: *"There was no sensitivity on the part of either the population or the administrations to put a stop to this economic growth based on destruction."* A2, which is echoed by another interviewee: *"There has been no concern about the environmental consequences of this excessive agricultural and urban development"* C1, while another maintains: *"It's a model they believe is best for Murcia"* B1. The deliberation of employing this „model“ is an ambiguous feat amongst participants; most argue the lack of environmental protection has been done deliberately as a way of generating fast profits and large financial returns. One participant states (C3), instead of framing it as stand-off between an economic growth and a desire to protect the environment, this participant maintains the problem should be viewed as a conflict of interest between various economic and social interests, which have not been sufficiently regulated.

Although various interviewees state a dissatisfaction with the political course of action in Mar Menor, there is an understanding that politicians and administrations do not operate in a vacuum and succumb to other pressures on which the following themes emerged within discussion.

5.1.2.1 Governance gap

For instance, a prevalent constraining factor mentioned by the participants when considering the lacking action of politicians was the coined the governance gap. This governance gap refers to perceived shortcomings in governance coordination across and within the various levels (local, regional, national and EU). One participant highlights the lacking coordination between the regional administration (Murcia) and the national administration (Madrid), which the participant argues enables the lack of control and application of existing environmental protection legislation: *"The lack of coordinated management between the regional*

administration and the national administration causes these situations of lack of control, lack of regulation, or if there is regulation, lack of effective application of the regulation." C1.

Participants also noted that this lack of coordination applies to the regional administrations of the municipalities bordering Mar Menor. Participants argue that there are discoordination's among these in terms of land management as everyone decides for their own: *"And there is also a certain lack of coordination in the use of the territory, because there are four municipalities with four different decisions."* C3, this is echoed by yet another participant (A2) stating that each of the four administrations sometimes follows their own agenda.

Participants argue that the executive power of the EU has no leverage due to being disjoint from the problematic. One participant mentions the fact that no sanctions have been dealt by the EU, rather they only threaten: *"The European Union here is threatening a lot, but then in reality they give a lot of leeway."* A2. Moreover, this and another participant points out that the threats of potential or even real sanctions leave the responsible agents cold, as they will be directed at the national government leaving the Mar Menor region untouched by this penalty: *"Well, they are calm because they generate the problem, but the consequences are for the central government, not for them."* A2 and *"Most people don't even know about the sanctions that come to us. And the sanctions for non-compliance with directives are directed towards the State, not towards the autonomous community and the ones who are mostly non-compliant is the autonomous community"* A2. This participant goes on to say that: *"The European Commission is also not too concerned about this as long as it appears legal on paper."* A2.

One participant shares his lack of understanding regarding the absence of the European Union in addressing the failure of the Natura 2000 network in Mar Menor: *"In other words, the Natura Network has not worked in Mar Menor, it has not worked. And the European Commission is looking the other way? No, no, I don't understand it."* B1. In a similar vein another participant emphasizes the multiple efforts NGOs had to employ towards getting the European Commission to acknowledge the problem, which ultimately resulted in one field visit to the region and a following publication examining and reporting on the present issue

and stakeholder views¹⁰. The participant mentions that despite this report being an important milestone, it remains not binding (A3).

5.1.2.2 Participation gap

Participants argue that the previous lack of social interest in Mar Menor's state has also significantly shaped political actions, and thus responsibility can also be attributed to a lacking participation in this matter by the broad public: *"And since society allows you to do so, then therein lies the difficulty of how these things will depend on the will, on the one hand, but in the end everything depends on the will of the administrations. What people don't realize is that the will of the administrations can be encouraged by the public to carry out their work. If the laws are not being complied with, it is because we citizens have not made them pay for the fact that they are not complying. Well, as I was saying before, despite everything, they continue to get a lot of votes. Of course, in the end they think well, I mean, what incentive do they have to change this? Farmers are pressuring them not to apply the law. On top of that, they also have their, their profits, not their income and so on. And society doesn't penalise them in any way for allowing the Mar Menor to be polluted and go to its death."* A2. Another interviewee goes further, arguing that it is difficult to find politicians who are able to convince society that restrictions and limitations are needed: *"It is very difficult to find policy makers who can really convince the population that limitations, restrictions, controls have to be put in place. That is very difficult"* C2. Moreover stating that the society keeps voting politicians who employ the economic growth model: *"I believe that society, in fact, in the elections, society in this region, as in other European regions, continues to support and vote for this model."* C2. The potency of social pressure on the political agenda is further exemplified by the participants alluding to the recent change of the political course after the visible degradation and subsequent social outcry. One participant states: *"It also coincided with the second big fish kill in the final stretch of this process, which is the 2021 fish kill in the southern zone, where for eight days they were coming out dead and so on, what a horror. This also helped to collect many more signatures, but also to put more pressure on politicians to find solutions."* A2. In a similar vein participant C1 states: *"But this, this shift to an iron fist politics. It has only happened since the Mar Menor environmentally collapsed, with the green soup in 2016 and*

¹⁰ This report is briefly mentioned in Chapter 3: Mission Report by the European Commission (2022)

then with the massive death of fish in 2019, that is to say, very recently". This is also paralleled with one participant mentioning the direct vocation of the vice president of the central government (Madrid) to intervene and create the Oficina Técnica del Mar Menor. This interviewee explains that the main objective is the coordination, supervision, and education of the established recuperation plan of Mar Menor supported by a large financial grant from Madrid. The participant highlights the idea of the Oficina Técnica del Mar Menor is to bridge the coordination gap¹¹ among the other governing bodies. This participant exemplifies this by saying: *"What is happening is that we are working, trying to build bridges, for example, with the municipalities"* C2.

5.1.2.3 Power play

Another factor of contemplation raised by participants, was termed power play. Participants often seemingly relate this to economic power defining the course of action. The agricultural sector is most often referred to as a very powerful economic player in this region by participants. The discontent interviewees mention stems from the notion, that the agricultural sector's economic power is used as a vehicle to influence political agenda setting and guide the enforcement of existing regulations to their benefit. One interviewee states the powerful lobby as the reason for politicians turning a blind eye towards the implementation or regulation of environmental legislation. One of them, for example, states: *"Why don't things work out? Because there is no will. The will is that the farmers remain untouched."* A2. This interviewee further emphasizes the correlation of the regional government not enforcing the regulation due to the economic power possessed by the agricultural sector: *"the autonomous community, which is the one that has the most legal weapons to stop them, but they are never stopped because of that, because at the end of the day it is very few hands that are concentrating a lot, a lot of money"* A2.

The element of intimidation as a form of pressure was raised by two interviewees. Stating on the one hand, that the regional government is intimidating/exerting pressure on critical voices: *"The little that has been organized is very quiet, because the regional government has taught people very well that whoever talks gets punished and whoever keeps quiet gets benefits, which means that people don't usually feel like talking."* A2. Or in a similar

¹¹ This could also be seen as implemented solution for the aforementioned logistical gap

vein: *"It's an example of how politics work here. If you talk too much, we take you out of the way and the one who doesn't talk profits."* A2.

On the other hand, participants mention the agricultural sector exerting pressure on both the regional government and critical voices of the society. For instance, two participants, mention having been threatened for speaking out about the agricultural sectors dominance: *"tread carefully"* A3 and A2. As an example of the agricultural sector pressuring regional politicians, one participant (A2) describes a case in which individuals threatened to prosecute politicians voting in favour of a proposed law the agricultural representatives considered bad for their business. The participant, in turn, states the law's purpose was to further strengthen the compliance with already existing directives aiming to protect the environment, which aren't sufficiently enforced in the first place (A2).

Interesting to note here is that in one statement regional government officials are accused of exerting pressure on critical individuals. Yet in another statement the regional government officials considered to be pressured by the agricultural sector, this allures to a diverse and elusive power distribution. In a similar vein, the heterogeneity of the agricultural stakeholder group in Mar Menor is highlighted, and subsequently, its power distribution. Participants explain the dependency of local farmers on the demands of larger multinational conglomerates, arguing that the local farmers could be considered as having false autonomy (A2). This is better explained with the following quote, stating: *"Many intermediary farmers still have their land, but they don't cultivate what they want to cultivate. They are the ones who can be considered as having false autonomy. At the end of the day, they are farming in order to sell their production to a company or a cooperative that is going to sell it in Europe under certain conditions. So, they are squeezed by these conditions."* A2. Moreover, he suggests that these intermediary farmers don't like how they are cultivating their land (A2). Another interviewee (A3) shares this opinion.

5.1.2.4 Knowledge gap

The fact that environmental considerations have been falling to the back end of the political agenda, is also be explained by what some interviewees mention as a lack of environmental culture or knowledge: *"there is not enough of an environmental culture"* B1, here defined through the theme *Knowledge gap*. An interviewee mentions the fact that many people are not aware that an ecosystem is an extremely complex system that, once out of balance takes

years to regenerate: *"When the problem arises and you realise that an ecosystem is not like a machine that if you make a mistake you hit the lever backwards and it recovers."* C3. Additionally, one interviewee (C2) mentions that it is a lot of work to educate the broad public to understand the value and service ecosystems provide. This participant exemplifies that from an economic standpoint, the overexploitation and degradation occurring in Mar Menor have impoverished the region as ecosystem services, such as water filtration or healthy soil biota for crops, are no longer "free services" provided. Moreover, now large sums of money have to be invested to reverse the degradation, ultimately in the grand scheme of things leading to a negative economic impact in the society. Overall, this view is echoed by another participant who states: *"I think that this perception in the society was not present and still is not."* C3.

Also mentioned is the seeming inability of scientific knowledge and warnings to penetrate the political and social sphere. Participants note that although there have been warnings within the scientific community about the impact the economic expansion could have, the urgency hasn't carried over to the public: *"And well, it's not that there was no warning of what was happening or what could happen, because the university was warning that a situation that could collapse was being provoked, right? But, well, that warning from the scientific community was not taken into account, it was not taken into account with the necessity, that is, with the importance that it should have been."* C3. A1 resonates with this stating the surprise upon learning that scientists had already warned in the 80s about the impact the overuse of fertilizer could have on Mar Menor. Another interviewee, mentions the heterogeneous landscape of reporting on the main cause from a technical scientific standpoint. This participant states: *"It is a complicated issue because from a technical scientific point of view, there are always reports and counter-reports. And therefore, there is a debate about the main cause."* C1.

5.1.2.5 Intersection knowledge gap x power play

The above-presented themes are not always isolated from each other, and sometimes issues that the participants state can overlap with other deduced themes. One of these intersections is the *knowledge gap x power play* intersection, which is illustrated here as the participants' understanding of deliberate actions to disinform or spread misinformation through an anticipated objective body. Participants stated concerns about the integrity of a scientific

committee brought in to report and evaluate on the environmental status of Mar Menor; one participant described it as: *"A super disputed scientific committee"* C1. Another interviewee argued this committee is subject to influence from the regional government: *"It became clear that the committee was not functioning well because there were too many technicians from the administration trying to control the opinion of the committee and then the functioning was very irregular."* A2. They further articulate that many scientists abandoned their position within this committee and only individuals close to the autonomous regions administration remained, ultimately defying the point of an independent scientific committee. The participant notes: *"So the one who is the spokesperson of the scientific committee, is practically the spokesperson of the autonomous community. Because there are only the technicians of the administration and few scientists left. And it doesn't work. This is not independent."* A2. In a similar vein another participant suggests *"I think with the exception of two people, the rest, all the rest of the people resigned this Thursday."* B4.

Another participant maintains that one large conglomerate, has been attempting to shift the discussion about the origin of the environmental degradation of Mar Menor from the agriculture as the origin to waste water as the "real" problem, through financing scientific studies which underline their claim (A3). This view is echoed by another participant arguing: *"On a scientific level, there is no doubt. On a social level, the big economic powers in agriculture have put a lot of money into fake news disinformation campaigns and how to get the public to believe a story that is totally false."* A2.

5.1.3 Underlying Paradigms

5.1.3.1 Fundamental error

The following theme, discovered through the interviews, differs from the above-mentioned. Participants here primarily state that the inherent problem lies primarily in the notion that humans regard nature as separate from themselves, and contingent on being owned by them: *"And as if it were something separate from the human being and from the human being, he owned it."* B2 which conditions the idea that: *"nature was considered simply an object"* B2. This is further emphasized with the belief that nature's resources are considered as infinite: *"Thinking as if nature was something that had no end and that its renewing force was infinite"* B2. This interviewee defines this notion as a generalized mistake, arguing that nature or planet

Earth lies the basis for humans to exist: *"We cannot live without nature? No, not even for an hour. So, it is a general mistake. What happens is that the one who has the power is the one who can act. And by declaring that nature is an object and that our development model is based on the unlimited exploitation of this object, we have already condemned it to destruction with it."* B2. Within this quote, the notion is raised that humans declaring nature as an object whilst pursuing an economic model based on growth ultimately leads to the inevitable destruction of nature. Furthermore, the interviewee raises an additional interesting point, namely the idea that only someone who can act on their own behalf ultimately possesses power. In a similar vein, the need for Mar Menor to be legally represented in order to be protected from further exploitation is highlighted by another participant (A1).

This idea is further underlined with mentioning the parallel of the women's rights movement, which was highlighted by a few participants, in this instance stating: *"That is why it is as revolutionary and as important and as urgent to recognise rights as it has been revolutionary. To recognise women's rights. If not, we would not be as we are right now either. Only half of humanity or less would be dominant. Because whoever dominates, whoever can act on another with impunity, and that is the one who has rights. And now they have the ecosystems rights and there is already an advance in equality."* B2. Succinctly put, recognizing the rights of women has been crucial, as without it, women would not be where they are right now. This highlights that without recognition of women's rights only half of humanity would dominate the rest, meaning that women and nature would be in the same position, dominated by men.

When considering the ineffectiveness of previous environmental legislation, this participant opens up another line of thought by arguing that the value of nature is recognised by protection legislation, but what ultimately renders it ineffective is the lacking ability to listen to what the ecosystem needs: *"Because, of course, the whole figure of protection is true that nature is recognised as valuable, but its needs are not listened to."* B2).

5.2 Participants Perception and Understanding of the Solution

At the center of the second research question lies the successful proposal of attributing Mar Menor the legal status of personhood. The aim is to understand why participants envision this

new mechanism to be the solution for the current perceived problem. Overall, we concluded on three themes ultimately rendering a nuanced regard by the participants in terms of the suitability of the legal personhood model in addressing lacking efficacy of environmental protection legislation.

Before we turn to the description of these three themes, we would like to briefly mention an interesting point. This being the emphasis that most interviewees put on the regulation¹², which according to them, will allow the law to come into full effect, as it will define important guidelines. Following quotes illustrate this notion: *“It won't be enforceable, if there is no regulation”* C1 and *“Because what is missing is the approval of the regulation, which is being discussed right now”* A2 and *“We are waiting for that soon the regulation will be approved, so that all the details will be defined”* B4. Which one participant (B4) explains had been substantially delayed due to the political situation in Spain. However, one interviewee, strongly opposed the notion that the regulation holds so much weight in terms of bringing the law into effect: *“It does not matter, the regulations purpose is to define how people should be elected and such, but the law is in full effect”* B2.

Let us then, turn to the three standpoints could be deduced:

- I. *Hoping for change*: anticipation of potential benefits of the new law 19/2022, however lacking a clear understanding of its implications.
- II. *Expansion of rights as the missing link*: belief that the law 19/2022 represents a crucial component in ensuring adequate protection for Mar Menor.
- III. *Symbolic solution*: perception of the law 19/2022 as primarily symbolic, lacking practical impact.

5.2.1 Hoping for change

A key element in contextualising this emerging theme is the idea that the visible degradation changed the public perception of the problem and led to widespread support for the ILP (public legislative action).

¹² In Spanish *Reglamento*. Defines in more detail, how the committees will be structured and established. It is subject to a public participatory process.

First and foremost, participants state the extraordinary public mobilization across local, national and even EU levels for the ILP (public legislative action) to get the legal personhood model for Mar Menor established. Most also recount the difficulty of meeting the requirements of 500,000 signatures, while being amid a global pandemic.

It is interesting, that often the alteration of the public perception is highlighted as a main driver of involvement. One participant points out that the rise of the ILP coincides with the third visible destructive episode in Mar Menor: *"Furthermore, in the final stretch of this process¹³ was the second big fish kill in 2021 the south of Mar Menor. Where for eight days there were appearing dead and so on, terrifying."* A1. Additionally, the participant notes that the ILP process benefited from the visible deterioration of Mar Menor: *"I don't know if I am going to say a sacrilege, but it was lucky for them that the fish died, I don't know if lucky is the right word - it made society more aware"* A1. Another interviewee echoes this, expressing: *"Where the climate and environmental crisis is already very real, where people are already seeing it."* C1. Moreover, this participant highlights, that seeing Mar Menor degraded changes the view on the importance of the issue of its degradation: *"It's very different going to the Mar Menor and it's all full of dead fish. Of course, then your perception changes."* C1, in a similar vein one interviewee (B3) recounts becoming an activist to fight for Mar Menor out of necessity in 2020 (after the first fish death).

Another central vein, which emerged within this theme is, that most participants and individuals who signed the ILP don't understand how the legal personhood model will work. The seeming irrelevance of the content of this law to the broad signing public is underlined by the statement of one interviewee, describing the process of the signature collection to reach the 500,000 necessary signatures to bring the law before parliament, explaining: *"(..) because people wanted to sign, they didn't know what they were signing they just heard Mar Menor and wanted to sign."*¹⁴ A1. This is echoed by another interviewee declaring: *"No, I don't think most of the people who have signed really understand how it works."* A2. Some participants, when asked about whether they could give a more in-depth explanation about the implication of this new idea, shared that they do not really understand it and that Teresa Vicente¹⁵ would

¹³ The participant here refers to the ILP (public legislative action)

¹⁴ Authors note: this quote is paraphrased as the original sentence is difficult to understand when translated

¹⁵ Teresa Vicente is regarded as the pioneer of the ILP and idea of attributing Mar Menor the status of legal personhood.

be a better person to ask about these details (A2) *"How will it work? To be honest, I don't really know."* C2; *"In reality I don't really know what it will bring..."* C3. The elusiveness of the practical implications becomes evident, also when considering the aforementioned ambiguous role of the resolution, as understood by some being crucial to understand the specifics of the law 19/2022 and for it to come into full effect in comparison to also being considered of secondary importance. Additionally, the importance of the "leader" Teresa Vicente to push this notion forward and as a source of knowledge about specific details becomes evident, when one participant recounts, that a judge in Cartagena attempted to make use of the law, but all the representatives which were summoned to court to represent Mar Menor initially did not grasp their role in this process and had to be called one by one by Teresa, explaining to them what to do (B2).

Nonetheless, despite their lack of understanding of the new law, the overall support of the law remains evident along with hope for concrete changes. The aspirations participants express for this law regarding the transformations it will bring provide additional insight into why this endeavour was supported and not just because it was presented at the appropriate time and place. Two points were subsequently mentioned.

Firstly, participants envision an easier manner to convict ecocide or delicts committed against the environment, here of course in particular to Mar Menor. A2 for instance, hopes for a change in way of reasoning, where it will be possible to prosecute on the premise of damaging the environment rather than on the premise of not complying with certain regulations, which this participant recounts has mostly been the case and is a very time-intensive process. Yet again, when asked to provide a more in-depth explanation, this participant refers to Teresa Vicente: *"But in theory one of the ideas is to make it easier to prosecute these crimes by changing the way of thinking. The damage caused to the Mar Menor as a legal person, with its rights and all. This is best explained by Teresa, who is the one who is the jurist, I more or less understand the concept, but I don't know how to explain it either."* A2.

Secondly, participants envision a greater participation mechanism mainly through Article 6, which allows everyone (any global citizen) to go to court on behalf of Mar Menor. A1 states the benefit of enabling people to report environmental misconduct without having to pay as a great advantage. Furthermore, hoping to being able to follow up on the procedural outcomes, through to the established committees as representatives. A1 describes that

previously one could report perceived misconduct to the “guarda civil”¹⁶, but later, one was never able to know whether the claim had been followed up or dropped.

Finally, one of the participants alludes to the idea that the practical implication in this present moment is secondary. What counts is to try new avenues of change and attempt to do something about the dire situation. Therefore, the question of whether it is the right solution becomes elusive as the desperation and hope for change are brought to the forefront. This participant notes: *“We have a saying that goes “de perdidos, al río”. Which means, when we have lost it all, we should try something new.”* B1.

5.2.2 Expansion of rights as the missing link

The main argument put forth by participants for attributing legal personhood to Mar Menor is that it will protect it better from exploitation. There are three points, which participants mostly referred to within this theme.

Firstly, attributing rights to nature is seen as leveling the playing field and, thus, as the ultimate step to ensure its protection. Participants argue that through the attribution of rights the exploited entity can no longer be taken advantage of since these rights now draw out boundaries of this entity: *“Because the one who has rights who can act. It is only possible to limit the actions of those who have rights, when the exploited also has rights, because it limits them.”* B2. This view is reiterated by another interviewee who argues: *“And therefore Mar Menor is a person who has certain rights and the company is another person who has other rights, so it will no longer be: “It's not that it has to take care of an object”. No, they are two subjects and they are one against the other, and then the judge will have to decide in this battle of rights who is more right, the Mar Menor with its rights or the company with its rights (...)”* B1. The quote above also illustrates another recurring element, namely the transformation from object to subject through the attribution of rights: *“No, they are two subjects”* B1. The participants' understanding is that an object is protected to serve a purpose rather than for its own worth. The following quote illustrates this notion, drawing parallels to the time when women had no rights and were protected through their husbands for their husbands: *“Protected as a valuable object to serve the man, but not for themselves”* B2.

¹⁶ The „guarda civil“ (en: civil guard) is a law enforcement agency in Spain similar to the police.

Leading us to yet another common theme across the interviews which was drawing parallels to the attribution of rights to nature with past efforts and successes of giving rights to slaves and women often recounting that this led to the empowerment of women. In a similar vein, another interviewee states: *"humanity has evolved giving rights to men, then to women and etc.(...)"*A1. One interviewee goes even further by stating: *"Nature is the last entity to be given manumission¹⁷, and manumission occurs when an object becomes a subject."* B2.

Turning then to the last element discovered within this theme, which is the notion as brought forth by participants that the legal personhood model attributes *"a permanent body to study the needs of the Mar Menor."* B2, which are the three committees (see section 3.5.3). One participant highlights specifically the importance of listening to Mar Menor, stating: *"And now we have to listen to the voice of nature."* :3 B2. The scientific committee is deemed to be the entity listening to what Mar Menor has to say: *"What happens is that you have to know how to listen to it from those who listen to nature scientifically, the scientists who are studying what nature's needs are and what is its right and not just anyone who lives in an ecosystem."* B1, this is echoed by another interviewee stating: *"The scientific committee tells you what hurts Mar Menor, that is, what is their pain, what is their illness, what is their need."* B2 .

Overall, the participants deem the scientific committee to be the "truth possessing entity" in terms of speaking for Mar Menor, declaring: *"The natural law is what we have to learn and scientists know it and they have to pass it on. If they don't know how to transmit it, we should ask them to tell us again and again until we understand it, because we have to understand what the natural law behind Mar Menor is and if we can respect it we have completed ecocentrism. Well, we have understood ecocentrism."*B1 ; *"The Mar Menor is a living entity. I need to listen to the scientific committee that says: "No, the Mar Menor needs to be isolated."* B1. While the scientific committee is deemed as the entity listening to Mar Menor, the participants state that everyone can be its voice: *"All of us. Article seven, states that anyone is the voice of Mar Menor. Because that is the scientific idea in the West and the indigenous people. (inaudible) cosmovisions. We are all nature, we are nature"* B2. Similarly, another interviewee describes the process of the joint committees making decisions on behalf of Mar Menor, equating to them being its voice. *"But when a decision is taken by the tutoria, it is as if the Mar Menor is speaking."* B1.

¹⁷ Note of author: This word specifically refers to the juridical act of freeing slaves from their owners.

5.2.3 Symbolic solution

Taking into consideration the last emerged theme, where the overarching notion is that the law is only of symbolical value, considering the discussions of perception that nature should be considered as intrinsically valuable, as well as the broad media attention the case of Mar Menor has gotten through the ILP.

One central point of contention is that the law is too vague. One interviewee maintains that the reason might be to successfully pass the voting in Parliament¹⁸ on the approval of the law. (*"Why is the law so indeterminate? I realised it later. In order to not generate opposition."* C1). This participant further states that the vagueness of the law and the fact that many questions remain open or are not addressed, renders it, as he calls it, merely declarative. Thus, ultimately the legal personhood model for Mar Menor is considered a new political entity, in a context where there are enough political entities, illustrating this notion by saying: *"What has been done is a declaratory law where the only thing that is clear is that some new entities is going to emerge. And well, more entities.. There are plenty of entities, but the point is that their functions, their legal regime, their budget, their controls, are not well defined."* C1. In a similar vein, another participant raises the point that it might be complicated to delineate the functions of these entities as public administrative officials are envisioned to carry responsibilities or be part of the law: *"I see it as complicated because, in addition, the administrations have responsibilities that are set out in the regulations."* C2. This participant further says that although supporting the process, the committees should have been designed as a fully independent organ within the political sphere: *"My opinion is that it is not good, that they should be absolutely independent bodies."* C2. The reason being that the committees should operate independently from the political cycles, for instance elections (*"it should function independently so that, regardless of political cycles, it perpetuates itself."* C2). This interviewee exemplifies that at this moment there is a supportive field within the political sphere but this is potentially subject to change, as the political volition according to this participant depends on the representing people, which poses a risk for the legal personhood model. (*"Right now there is a good administration, because the person in charge of the Ministry is someone who has supported this from the beginning, the vice-president.(...) But if*

¹⁸ This is a crucial stage in the popular legislative procedure, as stated in Chapter 3. After the successful retrieval of 500,000 signatures the Parliament still has to approve the law, only then can it come into fruition.

this changes, you know that these things are very person-dependent. There are certain political sectors that don't like this idea (...) So, of course, if you consolidate a model that is too dependent on the administration, of course it is more risky." C2).

Furthermore, the question of legitimization of this new political body is raised. The participant is mainly concerned about the three committees, envisioned to have a say in a political sphere, expressing a strong opinion about the point that the committees now hold the power to decide over the course of action and allowed or prohibited actions within the lagoon. Arguing that ultimately Mar Menor is a public space which should be governed by the democratic state and through its mechanisms, rather than appropriating this power through a newly defined body. This point is exemplified in the following quote: *"The risk is that certain people believe they are the owners of this revelation and that this gives them more right to manage, let's say, or to decide about this natural space. So, I refuse that, because that natural space belongs to the public domain, so it is public property, thus it has to be managed through the mechanisms of a democratic state, through legislation. You don't approve? It doesn't work? Criticise it, present yourself to the elections, but what you can't do is to appropriate it. Saying : "We are the defenders of the Mar Menor! Why? Because of the ILP." But what is this? Now the decisions for Mar Menor are made through the promoting commission? No, I am not okay with this. Why? Because they consider themselves, let's say, the owners of the revealed truth and the triumphant of the process of the ILP. And this gives them legitimacy to manage."* :C1

Particularly the creation of the scientific committee within the law 19/2022, raises many questions, as already mentioned before, the official scientific committee has been deemed by some participants as not objective. This interviewee wonders how the scientific commission will be different from the other already existing ones. Moreover, how and who decides which one will be the official one: *"I think there are too many scientific committees and it doesn't help at all. To what extent is the scientific committee that is going to advise the lagoon defenders, according to Law 19/2022, going to be the same, or different? And how come and with what criteria compared to the official Scientific Committee?"* C1

One more interesting element this participant mentions is the potential deflection the creation of the legal personhood model can pose to the real problem within Mar Menor: *"So, for me, the debate is about the lack of effectiveness of legislation, of public policies, of political*

criticism, that is to say, enough of corruption and enough of non-application, enough of connivance with the economic sectors. This is what must be applied.” C1

5.3 Mar Menors Iceberg and its Leverage Points

In the following section, we engage in a more detailed discussion of the findings regarding the degradation of Mar Menor and the inadequacies of existing environmental legislation in mitigating this issue as perceived by the interviewed participants. We delve into the various factors contributing to the ineffective enforcement of environmental laws, reflecting on the previously presented themes: governance, knowledge, participation, and power-related obstacles. Later, we explore the envisioned potential of the legal personhood model to address these challenges. Overall, this section aims to reflect and contextualise the problem - solution lineages and their intersection by drawing from concepts discussed within the literature review.

To enhance the discussion of our findings, we conceptualised figure 11 to provide better context regarding the perceived problem and offered solution by the participants. We draw from the iceberg model as encountered in the literature review and presented by (Davelaar, 2021). The iceberg model, provides a fitting metaphor for understanding the layers of complexity. Just as the bulk of an iceberg lies beneath the surface, the true nature of the problem facing Mar Menor extends beyond what is readily visible. By exploring the layers below the surface, including systemic structures and underlying mental models, we aim to uncover the fundamental drivers of the degradation. We will combine this with the leverage points concept to assess potential solutions the legal personhood model offers.

It's essential to recognize that visualizing the issue as an iceberg, in the case of Mar Menor, might inadvertently imply rigid boundaries. Therefore, we want to encourage the reader to visualize the iceberg as an entity within a broader context itself (for instance in a SES), this allows us to contextualise the issue in both a vertical (the depth of the iceberg) and horizontal (the lateral network of a SES) perspective. This note allows us to view figure 11 as a simplification and enhancement of comprehension by highlighting one central aspect. In other words, this visualisation poses as one central vein and serves as a strategic reference point for understanding and navigating the broader dynamics at play, with no claim to be an exhaustive depiction. This systemic approach allows for a nuanced view of causality, allowing

it to be seen as intricate and diverse rather than linear and exploring factors beyond those immediately evident in time and space.

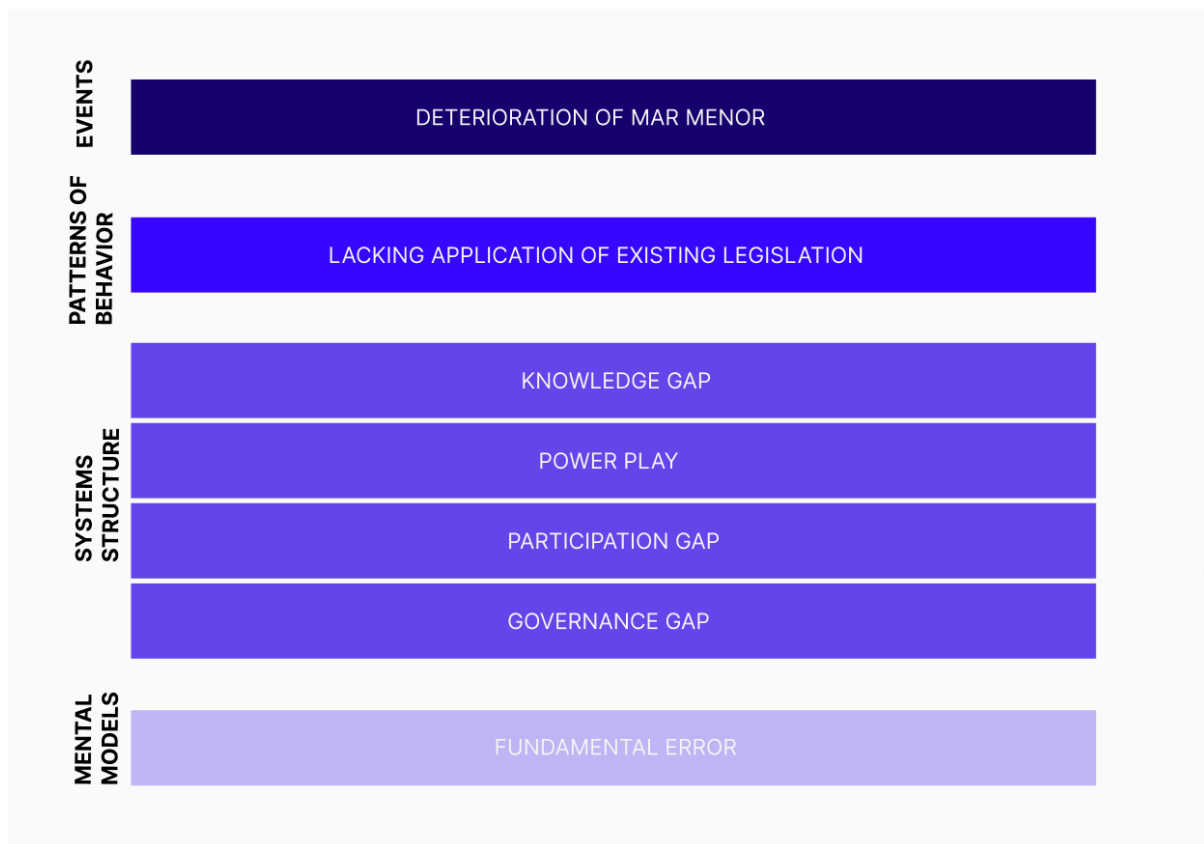


Figure 11: Mar Menors Iceberg model (own elaboration)

Figure 11 is this author's elaboration of the iceberg model reflecting the different layers of the problem axiom as understood by the participants, illustrating the findings of the first research question. It is evident, that the event in question is the visible degradation of Mar Menor. The apparent degradation is a significant concern to the participants and, as some state, the reason for their turn to activism or involvement in the ILP.

The patterns of behavior layer, defined here as the lack of application and enforcement by governing entities of the already existing legislative protection, as stated by participants. The impression of participants that most legislative protection mechanisms have not been effective, is consistent with several reports discussed in the case study review (see Chapter 3), which state that the plethora of environmental protection legislation has been largely ineffective in shielding Mar Menor from degradation (Erostate et al., 2020; European Comission, 2022; Garcia-Ayllon, 2018; Perni et al., 2020). The disjoint reality of the plethora of policies protecting Mar Menor and its present ecological state has already brought up the

question in the case study review, as to why these measures are not sufficiently enforced or yet implemented in Mar Menor.

Here the interviews reveal additional nuances of the potential reason as to why the environmental protection legislation has not been applied by the governing entities, which in the figure 11 constitute the level of system structure, defined as elements defining the overall organization and architecture that influence a system's functioning. The four themes uncovered within the interviews, are understood as structural components within this system and are not represented in any particular order within the figure 11: the governance – , knowledge –, participation gap and power play. It should be noted that, these are merely the dominant themes encountered within the interviews and most probably do not represent an exhaustive account of the systems structure. The identified themes reveal some parallels within the literature review, encountered reasons for inapplicability or ineffectiveness, but they also present reasons not previously mentioned or encountered (e.g. power play). Each theme promises an interesting angle of discussion. The aim here is to demonstrate, with the help of the visualization of the iceberg model, that an issue can be perpetuated by various distinct elements, contributing towards the effectiveness of, in this case application and efficacy of legislation to protect nature. Thus, we will briefly touch on each element in order to contextualize it within this figure 11.

Within the governance gap, participants mainly argue that there is a lack of coordination among the responsible governing entities considering Mar Menor. They highlight specifically the difficulty of reaching a coherent management strategy of Mar Menor when the national, regional and local organs are responsible for different areas, and their aims and actions can quickly become misaligned, influencing each other. Participants for instance exemplify the fact that Mar Menor is bordered by various regional administrations, who define the surrounding land use. The European Commission (2022) highlighted a similar fact in their Mission Report about Mar Menor, stating the need for a more coordinated approach between national, regional and local administrations, this is also echoed by A. Lillebø (2014). The issue of miscoordination has been addressed through the establishment of the Oficina Technia del Mar Menor, which aims to connect national, regional, and local governing bodies. Moreover, the Mission Report urges the European Commission to keep a closer eye on the events in Mar Menor. Participants, for instance feel left alone by the European Commission, as a guarding and enforcing entity, as they had to make multiple efforts to involve the EU in the matter.

Additionally, they feel that the main tool for getting the local government to comply, which they refer to as sanctions, was not used, even though they perceive the situation to be grave enough to do so as the directives lack application. However, if used, participants state they wouldn't have any effect on the local authorities doing the damage as the EU sanctions nation states and therefore Madrid would be the one paying.

The knowledge gap represents another element which was previously encountered in the literature review, although subtle differences should be noted. Succinctly put, authors raised the point, that management policies for coastal lagoons could lack specificity due to insufficient knowledge about the workings of the ecosystem and thus do not achieve the desired effect (Eröstate et al., 2020). Here the insufficient knowledge resulting in a lack of sustainable development is specifically targeting groundwater-dependent ecosystems (Eröstate et al., 2020). Rather, within the interviews, the focus of the knowledge gap lies more within a general understanding of ecosystems and ecological processes in their entirety. Highlighting the erroneous preconceived notion that ecosystem services or resources are infinite, as well as the difficulty of conveying that once out of balance like Mar Menor, ecological processes take a long time to recover, therefore action should be taken before reaching the tipping point.

One surprising element, which was not encountered previously, is the element of power play within Mar Menor. Theoretically, the notion that there are large players setting the political agenda is not a surprising phenomenon, as many scholars highlight the various stakeholder interests at play (Guaita-García, Martínez-Fernández, Barrera-Causil, & Fitz, 2022). The nature of the conflict of interest, as stated in the case study review, and the various elements brought forth by participants differ as participants point out the influence of large conglomerates and representatives of the agricultural sector go beyond lobbyism. Take for example the perceived spreading of misinformation campaigns to elude the origin of the degradation of Mar Menor. Another interesting finding here, is the relationship of landowners and large international conglomerates participants point out. Especially the statement that landowners are pressured under the conditions of these international conglomerates and although they are seen as the producing a large portion of the cause to the degradation of Mar Menor, the “real” culprits are situated far away at the end of a long supply-chain.

The participation gap, defining the lack of involvement or pressure exerted on governing officials by societies casting their votes, has been brought to light by a handful of participants. This aspect was not previously identified in the literature review as a factor to be considered in the broader issue concerning Mar Menor. Nonetheless, after careful consideration, it is not surprising that the society in a democratic governance system can be a shaping element of policy application, for instance, through protests. Furthermore, on a more general note, the broad social movement out of which the ILP rose showcases this exact point. For instance, as shown in the results, several participants recognise the shift in perception that the visible degradation of Mar Menor provided them with, and the consequent engagement and urge to safeguard this immaculate ecosystem. The broad mobilisation of society also led to increasing actions from the governing entities to resolve the issue - ranging from the central government becoming involved and creating the Oficina Técnica del Mar Menor, to publishing the management plan of the protected zones through the Natura 2000 directive after 20 years, as stated in the case study review.

Due to the exploratory nature of this study, each of the themes elaborated on was not pursued in great depth during the interviews and therefore pertain to a more general nature, which is here used to provide a tentative preliminary understanding of the various elements limiting the effective protection of Mar Menor as understood by the participants. It is rather difficult to evaluate each of the themes in great depth as for this the data is not sufficiently detailed and one could run the risk of overinterpreting the findings. Nevertheless, these findings present an interesting avenue for further research.

Let us now turn to the last defined level within figure 11, characterized as the level pertaining to mental models. Which was mentioned within the section two of this chapter as perceiving the root of the problem within the underlying paradigms or as referred to by Donella Meadows (1999) in mental models. Anchoring the fundamental error theme, which emerged in the interviews within the mental models layer stems from the observed parallels it has to the idea of worldviews shaping the world we live in (D.Meadows 1999). At the heart of the fundamental error themes lies the mistaken notion that humans and nature are regarded as separate, which is one characteristic of the anthropocentric worldview, this concept was already discussed in more detail in the literature review. Participants who believe the legal personhood model to be the ultimate solution and to remedy the ineffectiveness of environmental legislation maintain that the notion of humans and nature as two separated

entities translates into a reductionist view of nature, namely as purely an object rendering nature subject to being dominated by humans, ultimately leading to nature's destruction. Considering the literature review, this observation is not surprising as the legal personhood model and, in the broader context of the rights of nature domain, which are anchored within transformation of an anthropocentric thinking towards an ecocentric thinking. The overarching shift into ecocentric thinking, by leveling the playing field and attributing rights to nature so that it can no longer be freely exploited by humans, promises to rectifying environmental problems. The potentially reductionist dichotomy of human-centered vs earth-centered thinking as the foundation of reasoning within the rights of nature context has been raised by authors and will be touched on in the latter segment of this discussion (E. Macpherson, 2021; Tanasescu, 2022).

In summary, the section above has introduced this author's elaboration on the iceberg model of Mar Menor, along with providing a brief contextualization. Let us now consider the concept of leverage points as introduced in the literature review, in an attempt to relate the findings from the solutions axiom to the previously discussed iceberg model of Mar Menor illustrating the problem axiom. In other words, contextualizing the participants understanding of how the legal personhood model is envisaged to be a better solution for environmental protection legislation.

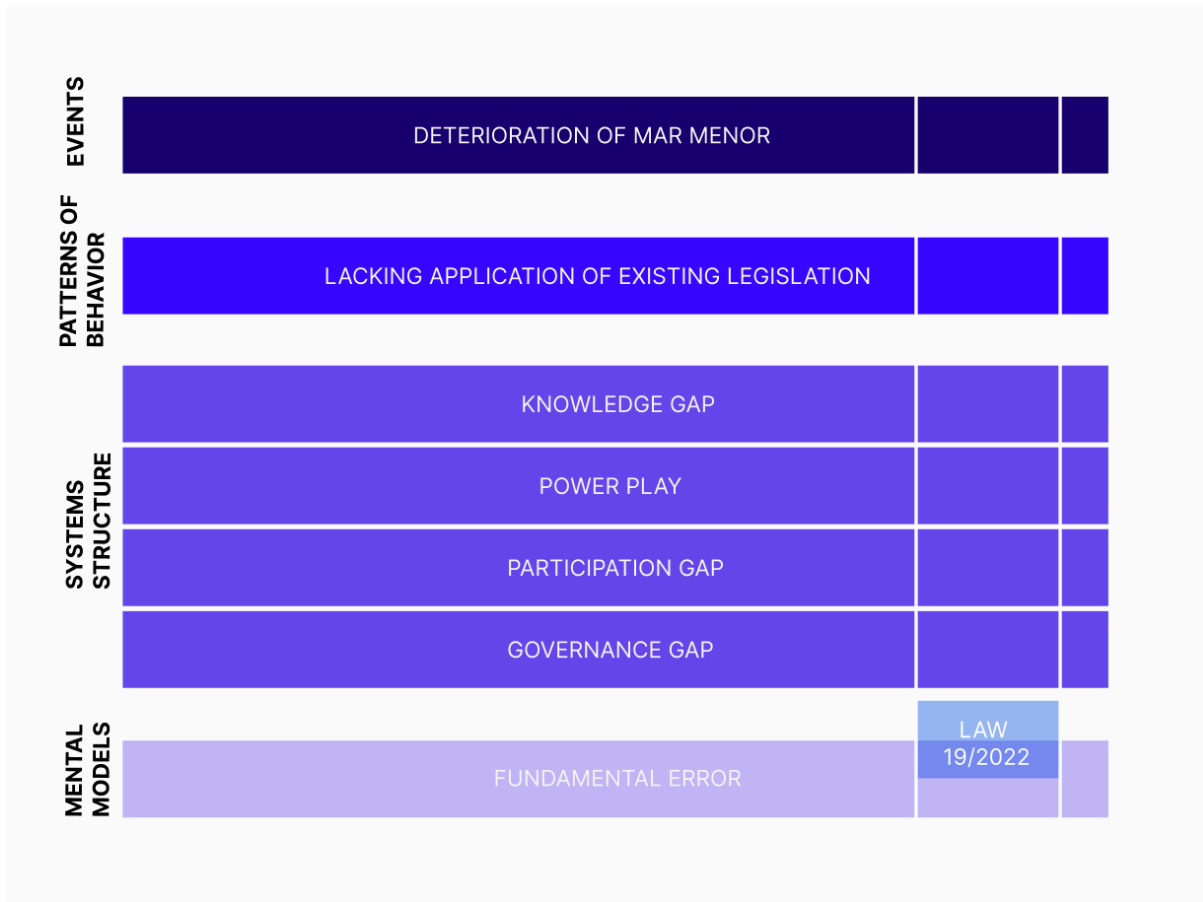


Figure 12: Iceberg model for Mar Menor and the leverage points of the legal personhood model (own elaboration)

Figure 12 once more illustrates the iceberg model previously discussed, we envision the legal personhood model (here law 19/2022) situated in an elevator shaft with multiple entry points to the various layers in the iceberg model of Mar Menor, the inspiration of the elevator shaft as superimposed on the iceberg model was found in (Davelaar, 2021) and schematically depicts the notion of leverage points. As previously stated, we draw on the concept of leverage points, as it proposes an intriguing angle of relating both the participants' understanding of the problem with the understanding of the proposed solution. The cases within the nature rights movement more often than not vary in their practical application rather than in their emergent narrative (Tanasescu, 2022). It is therefore intriguing to discuss the intended or envisioned practical application as understood by participants. The consideration of the practical vision of the participants allows for a deeper reflection of each layer. More specifically, taking the developed and previously discussed iceberg model, we now travel upward in our fictitious elevator, focusing on the question: How is the legal personhood model understood to leverage the different layers? As already mentioned in the section 5.2 of this

chapter, participants showed an ambiguous understanding, which was translated into the three overarching themes discovered within the second research question.

It could be of use to briefly touch on the differences between the themes *hoping for change* and *expansion of rights as the missing link*. They share many parallels, but were ultimately defined as two categories because only the *expansion of rights as the missing link* theme conveyed the belief that this novel approach is the solution to combat the previously shortcomings of environmental protection legislation. The *hoping for change* theme was defined through being inspired and hopeful but ultimately the practicability of the approach was not clear. Nonetheless this theme encapsulates specified hopes about how it will unfold, which align with general notion of the “*expansion of rights as the missing link*” theme. Therefore, in the next section, instead of distinguishing between three main themes, we will merge these two themes into one, namely the *proponents of the legal personhood model*, to provide a more comprehensive argument.

It is understood that this composite theme leverages the deepest layer of the iceberg model of Mar Menor. Namely, the mental model layer, here, in particular understood by participants as the *fundamental error*. Succinctly described here again, for better comprehension purposes. The *fundamental error* theme inhabits the following notions which can be understood as conditional to one another: viewing humans and nature as two separate entities gives way to humans perceiving nature as an object, emanating into humans appropriating nature as a freely exploitable resource, where its instrumental value will always be superior to the intrinsic value. Consequently, the legal personhood model is understood to leverage this fundamental error as: “*Nature is the last entity to be given manumission, and manumission occurs when an object becomes a subject.*” (B2). Thus far, the discourse or rationale employed showcases significant parallels with what Tanasescu (2022) described as the orthodox view in the rights of nature realm, which again underlines the question of how this rather abstract narrative is practically employed?

It seems possible that the understanding of Mar Menor becoming a subject is strongly correlated to having rights as declared within the law 19/2022¹⁹. Mar Menor is thus represented within the jurisdiction and moreover, in the practical sense envisaged to be

¹⁹ See article 2 (:43)

embodied by the three committees²⁰ and through any individual²¹ wanting to represent Mar Menor on its behalf in court. Taking a closer look at the way in which Mar Menor is to be represented through the legal personhood model. We find ourselves departing from the mental model layer onto the systems structure in figure 12, as we transcend from the paradigm realm, to the material world where this newfound subject now enjoys legal standing.

The next question we ask ourselves is how does this new subject relate or fit into the already existing system structures? Or in other words how will the legal personhood model now leverage the system structures layer? Our general premise is, and here we follow Tanasescu (2022), that environmental degradation needs to be further understood as a socio-political issue and not remain in the mental model layer, he states:

“In fact, it is impossible for the rights of nature to be consistently ecocentric, and no case to date has managed this unmanageable feat. Besides the lack of consistency, there are two basic problems with thinking in terms of the opposition anthropo-eco: it repeats exactly the same opposition that is foundational for modernist ways of thinking and is therefore impotent to overcome these; and it depoliticizes rights by making it seem as if the problem of environmental degradation and destruction is nothing but a problem of having the wrong kind of consciousness (rooted in the ‘anthropo-’). This latter problem obscures the fundamental role of political infrastructures in causing environmental destruction, a thesis that has been amply demonstrated, beyond reasonable doubt, in the vast literature on political ecology. The underlying problem of environmental destruction is not the lack of ecocentric values, now widely shared, but rather the willful persistence of political arrangements that demand a consumptive relationship to the environing world for their own reproduction.” (p. 101)

²⁰ See article 3 (:43-44)

²¹ See article 6 (:45)

Again, figuratively speaking the legal personhood model elevator thus successfully departed the mental model layer, as within our findings we understood that participants view the legal personhood model to be able to leverage the *fundamental error* layer. However, following Tanasescu (2022) we cannot stop here, the legal personhood model elevator needs to be able to pass through this level in order to be able to leverage the ones above, more importantly to transform the event in question. Where now the question resurfaces: How will the legal personhood model now leverage the system structures layer?

Considering the knowledge gap we wonder whether the legal personhood model might be subject to similar shortcomings as previously experienced with other scientific bodies? This is due to the striking notion presented by the participants is the fact that they envision the scientific committee to be the voice of Mar Menor. Mentioning, that the scientific commission will define what is hurting Mar Menor along with its necessities as they are the ones who “listen to nature scientifically”. This form of embodiment of Mar Menor's voice and needs stemming from a scientific standpoint, ultimately feels paradoxical. The phrasing of personifying Mar Menor through the attribution of “human” verbs such as needing and hurting potentially is an attempt to underscore Mar Menor's being a subject. However, making science the intermediary between Mar Menor and humans ultimately gives the impression of a special group of humans that are entitled to define the needs and wants of Mar Menor. Science and the legal personhood model thus seem to be the legitimizing factors of representing Mar Menor, as else one could pose the question why exactly does the scientific commission know what Mar Menor wants? The argument here is not, that science is not an accurate tool to understand ecological processes or natural entities, but rather that science as the source of knowledge about Mars Menor's ecological state is not a novel thing, much less revolutionary. The first warnings from scientists about the ecological threats to Mar Menor can be dated back to the 80s, then Mar Menor has been speaking for a while through science. However, these scientific bodies haven't been listened to or received the appropriate attention.

Another reason why this seems paradoxical is that ultimately, once again, humans narrate and define the needs, wants and desires of nature. This is a point which can be scrutinized from various angles and within the literature review, we succinctly touched on the criticism that the idea of humans speaking or representing nature has endured by (Elder, 1984;

Maffei, 2022) on this matter. Under this premise, one could argue that the incongruity of the envisioned to be ecocentric tool still unequivocally relies upon a positivist human-centered notion, also highlighted in the quote above (Tanasescu, 2022) .

On another note, the legal personhood model overall remains elusive to most participants, leading to uncertainty as expressed by participants in how it will unfold. Seeing as, through Article 6 in law 19/2022 everyone is entitled and encouraged to represent Mar Menor, this could result in limiting the participation as a lack in knowledge on how to make use of it could lead to a lack of use of this legal instrument. However, this participatory mechanism envisaged within the legal personhood model, could also potentially leverage the identified participatory gap, as individuals feel they are able to make use of the free-of-charge judicial route presented in Article 6 and decide to go to court on behalf of Mar Menor.

The governance gap also potentially still persists, through the eyes of most interviewees, the officiation of this legal representation is held back by the political/administrative body and thus is still subject to the volition or limitations of these administrative processes. The entanglement and dependency of the legal personhood model, in the form of its committees, on the political benevolence is further highlighted by another participant, who wonders if the political party in power²² is “ill-willed”, will the legal personhood model be hollowed out from the inside? Additionally, another interesting notion highlighting the embeddedness and thus reliance of legal personhood model on the system's structure is illustrated by the varying opinions about the importance of the regulation by participants²³. The law 19/2022 itself was published in September 2022; however, the drafting of the regulation was held up due to the delays in forming a majority government after the elections of July 2023, which persisted until November 2023. At the time of interviewing (April-November 2023), all Individuals but one mentioned that the legal personhood model was not yet established in full force due to the regulation being delayed. A newspaper published an article on the 26.01.2024, that the regulation had been through the state councils council's, thus one step closer to being published, nevertheless, aground within the administrative body (González, 2024).

²² They also make up part of the representing committee of Mar Menor by default

²³ This was briefly touched on in Chapter 5 (section 2)

Taking all of this into consideration, we are reminded of the third theme, which highlights the legal personhood model as a *symbolic solution*. We gather that, the danger of the legal personhood model becoming stuck in the systems structure layer could be that, the legal personhood model in Mar Menor ends up being solely a new political body subject to all the limitations previously encountered within the systems structure. Additionally, there is a danger of missing the real point in need of transformation as the discourse is centered around the wrong issue as in this participants view. Following quote illustrates this: *“So, for me, the debate is about the lack of effectiveness of legislation, of public policies, of political criticism, that is to say, enough of corruption and enough of non-application, enough of connivance with the economic sectors. This is what must be applied.”* C1.

Overall, it remains to be seen how and if the legal personhood model is able to leverage this layer. Nonetheless, as we attempted to demonstrate this remains an important factor, as whether or not it can withstand or address the complexities and issues within the systems structure level, might distinguishes it from previous environmental legislation efforts.

Conclusion

The current research aimed to explore the perception of participants in regard to the new law 19/2022 which attributed Mar Menor with the legal personhood status. The central research questions were as follows:

- I. What are the reasons of environmental protection legislation not being effective in Mar Menor as understood by the participants?
- II. How is the new law 19/2022 (granting Mar Menor legal personhood status) understood to be a better solution for environmental protection legislation?

Our findings suggest that participants have a nuanced view of the problems encountered in the Mar Menor when considering the ineffectiveness of previous environmental legislation. In short, the problems were rooted in the political domain, where participants identified various problems that we defined as the governance gap, the participatory gap, the knowledge gap and the power game, as well as being rooted in the mental models domain, defined as the fundamental error. We conceptualised these findings based on the iceberg model, in order to develop a comprehensible depiction of what the participants perceived to be the underlying causes of application ineffectiveness.

With regard to the second research question, our findings suggest that the legal person model is perceived by some participants as a solution for improving environmental protection legislation, as it addresses the fundamental error of perceiving human and nature in a dichotomous relationship. However, our findings suggested ambiguous conceptions about the whether the legal personhood model is adequate solution for a better environmental protection. Thus, we reflected on whether the way the participants have understood the model of legal personhood so far is able to give indications about the adequacy of leveraging the politically rooted problems perceived by the participants. Here we found that the legal personhood model, as it is currently conceived, may run the risk of succumbing the previously identified gaps. However, this remains to be seen, as this study is not in a position to draw any conclusions in this regard.

Despite the rigorous efforts invested in this research, it is imperative to acknowledge certain limitations inherent in this research study. When considering the logistical limitations of this research study, one could define budgetary limitations that prevent the undertaking of another field visit to the Mar Menor. The field visit that was carried out was great for getting an initial feel for the study area and making initial connections, however, more time would have been useful to gain a deeper understanding and potentially reduce the difficulty of contacting certain interviewees who weren't present during that week, as a face-to-face request is often more fruitful than an unknown email in the inbox. There were technical challenges with remote interviews conducted via Zoom. The free version only allows meetings to run for 40 minutes and then disconnects, allowing users to rejoin the room but disrupting the flow of the conversation, which has to be restarted when the participant rejoins the meeting. Where this could be avoided, Microsoft Teams was used.

Finally, it is imperative to highlight the importance of acknowledging the interaction between the researcher and the object of study. As researchers are inherently influenced by their theoretical and epistemological perspectives, and given that the foundation of this study was built on an extensive and thorough literature review, it becomes clear that the work is not conducted in a vacuum and is subject to the subtle influence of underlying opinions formulated in the researcher's mind throughout the process. This can lead to an attempt to search for one's own biases in an exploratory study, although awareness of this fact could potentially counteract this risk, it should be mentioned (Braun & Clarke, 2006). Furthermore, careful planning in discussion with academics familiar with the topic was helpful in reviewing whether the construction of this research was feasible, and the drafting of the interview guide was helpful in reinforcing awareness and training not to ask leading questions when seeking further information within the interview. Last but not least, it is important to mention a possible translation bias in the presentation of the results, as all the quotes presented in this text have been translated from Spanish into English so as not to interrupt the flow of the reader. However, due to the fact that I speak and understand Spanish fluently, the translation bias should be limited, as the study and structuring of the results didn't occur in the form of a translated text.

Needless to say, within this framework, many aspects had to be left out in order to present a comprehensive exploratory study within this new phenomenon. There are a few avenues worth mentioning that could potentially lead to a deeper understanding of the issue

at hand. First and foremost, the findings of this study could be examined with a larger number of participants in order to gain a deeper understanding of the various shortcomings, as well as to examine the effects of the legal personhood model once it has been established. Another aspect of the study that was not sufficiently explored is the comparison of the rights of nature dialogue within Western societies without the participation of indigenous groups. As the rights of nature movement in many countries originates from within these often considered homogeneous populations, and yet is ultimately deeply homogeneous, the question arises as to how these multiple and diverse cosmovisions are potentially reduced to mere tokens as a result of being an adapted narrative within the West. Spain, with its colonial background, is an interesting case in this respect. Lastly, relating this application of the legal personhood model to others, for instance the here briefly mentioned cases from New Zealand and Colombia, could be an interesting avenue for further research as the subtle differences and learnings from each context could substantiate future application cases.

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Annex A: Interview question guide

Topic	Main possible questions	Follow ups/Notes
Personal information	• Could you tell me a little bit about yourself? • What relationship do you have to Mar Menor?	Occupation etc.
Mar Menor – Current environmental status and protection	• What are the main pressures exerted in Mar Menor leading to environmental degradation? (<i>is this common knowledge? Is this based on scientific research? Where do they inform themselves?</i>) • What were the limitations on previous municipal, national and EU-wide environmental protection efforts? • What do you think about the current status of environmental protection legislation?	• How would you describe the relation of the main pressures? • How can they be addressed adequately?
Rights of Nature = Legal Personhood Status	• Are you familiar with the concept of Rights of Nature? More specifically the attribution of legal personhood status to natural entities? • Are you familiar with other RoN cases, where legal personhood status was attributed to entities? • What do you think of this concept in relation to enhanced environmental protection?	
Process of ILP in Mar Menor	• Could you walk me through your experience of the key process points of the ILP petition and implementation? • What were the main limitations in <INSERT key process points here> (e.g.:the signature collection)? • Who were the key players? • How did you spread awareness about the ILP?	• What did you experience where crucial turning

	• How was this initiative received by the public?	points in this process?
Legal person Mar Menor	• In your opinion what will change by Mar Menor becoming a legal person? • What changes do you expect/hope to happen in the next 8 years? • Who will ultimately be the voice of Mar Menor evoking the rights? • How will you deal with different interests and opinions present in the three committees? • What role and position will Mar Menor as a legal person occupy in the legal and political context?	
Interaction/ Adaptation	• How will you make use of the new legal personhood framework in place? • Which synergies or potential ways to fit the legal personality into already existing protection schemes exist? ○ <i>Creation of a parallel system w/o ties to the political environment enforcing. New allocation of resources and labour in a new place rather than supporting and strengthening already existing structures.</i>	

Annex B: Consent form

Consent form to take part in master research project

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Title

Giving Nature Back to Itself – Finally as a subject in the Environmental-Sustainability Discourse?

Research summary

In light of the present global environmental degradation, the importance examining tools aiding to unlock a more stringent environmental protection is amplifying.

Mar Menor, Europe's largest saltwater lagoon has since September 2022 been attributed legal personhood status, through of a popular legislative initiative. A main motivator is the current detrimental environmental state of this saltwater lagoon, with over 80% of the marine life devastated and continuous fertilizer overload. No political or social action has been sufficient to keep the main environmental pressures at bay. This novel approach is embedded in a larger global narrative, pursuing to recognize nature as a subject and not merely an object to be instrumentalized at humans disposal, and thus ensuring a new form of environmental protection. Nature rights is not a homogenous phenomenon, although one can detect an orthodox narrative emerging on the global level. However, on a local context the cases brought forth vary greatly. Taking a closer look at the context, underlying mechanisms and practical implementation of a new emerging context is found to be crucial in gaining a better understanding of the extend of leverage this novel tool of granting legal standing to a natural entity can unfold in face of environmental protection.

This research project aims to study the development of granting Mar Menor legal personhood status through conducting semi-structured interviews targeting the population most closely involved in the process.

I..... voluntarily agree to participate in this qualitative research study.

- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation involves taking part in a semi-structured interview.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being audio-recorded.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that disguised extracts from my interview may be quoted in the master thesis
- I understand that signed consent forms and original audio recordings will be retained in the private laptop of Julia Papenhausen Fuster, who is the only one with access to it. Until the exam board confirms the results of their dissertation.
- I understand that a transcript of my interview in which all identifying information has been removed will be retained two years from the date of the exam board.
- I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information. Namely Iva Pires, professor at the NOVA University and supervisor of the respective thesis (e-mail: Im.pires@fcsb.unl.pt).