

SPECIAL SECTION**CULTURAL GEOGRAPHIES OF COASTAL CHANGE**

Metageographies of coastal management: Negotiating spaces of nature and culture at the Wadden Sea

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Coastal management and nature conservation may be regarded as sets of profoundly spatial practices with decisive influence on the material and societal construction of coastal landscapes and seascapes. In this context, practices of coastal management are active in the spatial ordering of the land and the sea, oftentimes producing sharp lines of demarcation in place of a fluid boundary zone. Similarly, practices of nature conservation can play a significant role in the socio-spatial separation of nature and culture at the coast. This paper places analytical focus on the diverse socio-spatial imaginaries or metageographies and processes of boundary-making underlying practices of coastal protection and nature conservation. Interpretative analysis of a climate adaptation strategy for the Wadden Sea coastal landscape of Schleswig-Holstein, northern Germany and interviews with key participants demonstrate the relevance of attention to multiple socio-spatial constructions of the coast in a policy-making context. It is concluded that policy strategies need to engage more explicitly with multiple cultural geographies of the coast, and the spatial implications of distinct stakeholder perspectives. It is further evident that both coastal protection and nature conservation constitute regionally specific and culturally situated practices, which cannot be addressed solely from technical perspectives, specific to individual disciplines and professional ways of working. Providing space for the emergence of new and alternative socio-spatial imaginaries of the coast may facilitate the future management of coastal change.

KEYWORDS

boundary-making, coastal landscape, coastal management, metageographies, nature–culture, Wadden Sea

1 | INTRODUCTION

This paper is concerned with the diverse socio-spatial imaginaries or metageographies underlying practices of coastal management and nature conservation at the coast. Coastal management may be regarded in terms of sets of spatial practices with profound influence on the material, societal and symbolic construction of coastal landscapes. In recent decades, the prerogative of climate change adaptation has led to a questioning of the appropriateness and long-term sustainability of conventional coastal engineering solutions, leading to a focus on “ecosystem-based” soft engineering approaches and a shift towards “working with nature” at the coast. “Hold-the-line” modes of coastal defence have in many places given way to alternative strategies such as managed realignment, beach nourishment or integrated coastal zone management (e.g., Shipman & Stojanovic, 2007; Temmerman et al., 2013). These diverse strategies of coastal protection reflect shifts in underlying rationalities and values also

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characterised by markedly distinct spatial implications, reflected in distinct understandings of the coast as, for example, a singular boundary line to be defended from coastal erosion and storm surges or a fluid space to be managed in a dynamic and flexible manner. The spatialities underlying these distinct geographies of the coast have, however, received little attention to date. This is particularly remarkable given the recognition within spatial planning scholarship of the influence of underlying socio-spatial imaginaries on processes of spatial planning (e.g., Davoudi, 2012; Healey, 2004) and the framing of coastal management as a situated cultural practice (e.g., Gesing, 2016; Brennan, 2018). Healey (2004), in particular, has drawn attention to the challenges inherent in seeking to change established spatial epistemologies and discourses. She argues that established socio-spatial imaginaries represent significant intellectual capital, which can affect the structuring of political and policy debates (Healey, 2004, p. 64). Faludi (2012) and Walsh (2014) have more recently employed the concept of metageographies within analyses of strategic spatial planning to refer to underlying discursive structures that shape how the world is understood spatially in particular institutional contexts. Based on these insights and employing the concept of metageographies within the context of coastal management, this paper focuses more specifically on the relationship between culturally embedded metageographies and boundary-making practices at the Wadden Sea coast.

The following two sections of this paper elaborate the concepts of metageographies and boundary-making, placing them within the context of existing studies of socio-spatial relations at the coast. Subsequently, the application of a metageographies approach is demonstrated through an empirical case study of the Wadden Sea region of Schleswig-Holstein in northern Germany, prior to a short discussion and conclusions.

2 | COASTAL METAGEOGRAPHIES AND BOUNDARY-MAKING PRACTICES

The term metageographies originated with Lewis and Wigen's (1997) critique of the taken-for-granted division of the world into continents. In their work, emphasis is placed on the processes through which geographical knowledge is ordered at a subconscious level: "the set of spatial structures through which people order their knowledge of the world" (Lewis & Wigen, 1997, p. ix). To date, the concept of metageographies has been employed to highlight the fallacies of methodological nationalism and state-centric thinking within political geography and geopolitics (e.g., Murphy, 2008; Taylor, 2000) and spatial planning at various scales (e.g., Faludi, 2012; Walsh, 2014). The term metageographies thus originates in a critical reflection on particular sets of territorial boundaries and bounded spaces and their influence on how actors spatially structure and view their world. Indeed, the analysis of metageographies inherently implies a focus on sets of boundaries, boundary-making practices and the imaginary and material spaces produced through such practices. Following a processual understanding of boundary-making as an ongoing and emergent practice more specifically places analytical emphasis on the spatialisation of difference through which complex and contradictory social realities are separated into apparently homogenous entities (Fall, 2002; Jones, 2009).

Viewed from this perspective, metageographies are instrumental in the production of particular socio-spatial realities, to the exclusion or marginalisation of alternative constructions (cf. Schroer, 2006, p. 175ff.). Metageographies are thus understood here to occur at the level of social structuration, characterised by relative stability over time. They are nevertheless contingent and open to contestation and change. Indeed, although metageographies may be understood as discursive structures and their potential for stability and continuity over time is emphasised, the need for sensitivity to historical patterns of variation and points of disjuncture is acknowledged.

Coastal landscapes have long been understood as boundary spaces, located at the edge, between the land and the sea. Despite a long history of fixing coastlines on maps and charts, the boundary between the land and the sea defies precise measurement and is characterised by rhythms of change across multiple time-scales. Indeed, previous studies have traced the emergence of a fixed, linear concept of coastline to the Enlightenment objectives of rationalisation and classification (e.g., Ryan, 2011). It is through specific practices of coastal protection and land reclamation that the concept of coastline as a fixed boundary line rather than a liminal space of gradual transition has taken hold in the geographical imagination (Ryan, 2011; Leyshon, 2018). This is particularly the case in relation to low-lying, soft coasts such as that of the Wadden Sea, where spatially extensive diurnal tidal ranges act as a "mental provocation" defying the modernist notion of a neatly, defined linear boundary between the mutually exclusive categories of land and sea (Fischer, 2011).

3 | METAGEOGRAPHIES AT THE WADDEN SEA: CONTEXT AND METHODS

The Wadden Sea constitutes an intertidal coastal landscape, reaching from Den Helder in the Netherlands, along the German North Sea coast to Blavands Huk in southwestern Denmark. This coastal landscape has been shaped over a period of

a thousand years or more by dyke building, land reclamation and drainage practices as well as periodic storm flood events producing a material and symbolically powerful boundary between the land and the sea. Today the intertidal landscape in front of the dykes is recognised as a unique, ecologically rich and diverse ecosystem of outstanding natural value with the status of a UNESCO World Heritage site (Hofstede & Stock, 2016). As a soft, low-lying coast, it is particularly vulnerable to climate change and projected sea-level rise.

It is within this context that the Ministry of Environment in Schleswig-Holstein adopted a climate change adaptation strategy for the Wadden Sea in 2015 (MELUR, 2015, hereafter WS2100). The publication of the strategy with a time horizon of 2100 followed a lengthy preparation process, involving public sector officials, nature conservation NGOs, scientific experts and representatives of the Wadden Sea islands. This 88-page strategy document provides the primary empirical basis for the analysis in this paper, which examines the spatial concepts and underlying metageographies employed within the strategy. In line with an interpretative policy analysis research design, the text-based discourse analysis was supplemented by the analysis of ten semi-structured interviews undertaken with public sector officials, NGO representatives and scientists who participated directly in the preparation of the WS2100 strategy. Interviews were conducted by the author in German, and were subsequently transcribed, annotated and coded following a constructivist grounded theory approach (Corbin & Strauss, 2015). The analysis of the strategy text incorporated a search for relevant keywords and a close reading of the text, focusing in particular on key statements where core objectives and principles are formulated. The interview quotes and strategy extracts cited below were translated by the author. The analysis presented in this paper is specific to the Schleswig-Holstein portion of the Wadden Sea (see Figure 1), reflecting the need for a situated understanding of the specific cultural geographic contexts within which practices of coastal management take place.

The WS2100 strategy is significant in working with a long-term time horizon and incorporating coastal protection and nature conservation objectives in a single document. Public officials saw the opportunity presented by climate change to develop a new policy frame for the future protection of the Wadden Sea, recognising the challenges posed by rising sea levels to both coastal defence and the ecological integrity of the coastal ecosystem. This process of reframing required engagement with existing spatial concepts and metageographies of the coast.

The integrated nature of the strategy is particularly significant given a history of, at times, acrimonious conflict concerning the designation of the Wadden Sea National Park in the 1980s and 1990s (see also Döring & Ratter, 2018). Indeed, the status of the Wadden Sea coast as a natural or cultural landscape played a central symbolic role in the fractious and polarised debates surrounding the revision of National Park regulations and the nomination of the Wadden Sea as a UNESCO World Heritage site in the 1990s. In particular, the protesters sought recognition not only of the cultural heritage of the reclaimed marshlands behind the dykes but also of the Wadden Sea in front of the dykes as a cultural landscape, lost to the sea in former times (Fischer, 2007). The alternative spatial imaginary of many the protesters was encapsulated in the slogan “God created the sea, the Frisians the coast” (in Krauß, 2005). Here the protesters called for attention to the coast as a man-made landscape associated with a particular “Frisian” coastal heritage and idealised coastal identity. The theological interpretation of the creation of the sea further served to distance the protesters’ worldview from the rational, scientific and demystified arguments of the nature conservationists. The proposed designation of the Wadden Sea as a World *natural* Heritage site was perceived by many as a negation of the cultural heritage of the coastal landscape, and strengthened existing binary oppositions between nature and culture and coast and sea (Fischer, 2007; Krauß, 2005). A climate scientist and member of the advisory board of the WS2100 preparation process, who himself is originally from one of the Wadden Sea islands, further captured the tension between different readings of the Wadden Sea landscape, remarking that from the perspective of the inhabitants of the region, the Wadden Sea is a “manmade land”: “This is a manmade land, also that what is under water, and it is presented as nature” (I_S1¹).

A close reading of the WS2100 strategy indicates the juxtaposition of multiple metageographies of the coast underlying and to some extent challenging the claim to a common understanding, as postulated by the authors. In a carefully formulated core statement of the strategy, the Wadden Sea region is defined as

a unique coastal landscape, an ecosystem characterised by natural dynamics and biological diversity and a unique area of human settlement with a long and varied history ... to be protected on a sustainable basis as our *Heimat* (home-place) and as a unique natural space. (WS2100, p. 12)

This statement of objectives explicitly acknowledges multiple socio-spatial constructions of the Wadden Sea as both a culturally significant landscape and ecologically valuable space for nature. The strategy objectives are further differentiated in terms of the protection of the Wadden Sea as an “energy conversion zone” to ensure the stability and security of the islands, *Halligs*² and mainland coast, the protection of islands and *Halligs* themselves as a “cultural space”, the preservation



FIGURE 1 The Wadden Sea coast of Schleswig-Holstein.

Source: Prepared by Th. Böge, Hamburg University.

of the dynamic development capacities of the Wadden Sea as a “living space” (*Lebensraum*) for its characteristic species and the sustainable development of the wider “Wadden Sea region” (WS2100, pp. 12–13). Here a process of boundary-making and compartmentalisation is evident with different spaces assigned to distinct functions. Based on these preliminary insights, the following sections of the paper focus specifically on three prevalent metageographies: the Wadden Sea as a space for coastal protection, a space for nature and as a cultural landscape.

3.1 | The Wadden Sea as a space for coastal protection

For the coastal engineers and geomorphologists engaged in the WS2100 process, the Wadden Sea was understood in terms of its functionality for coastal protection. In particular, the role of the Wadden Sea islands, sandbanks, mudflats and salt marshes in the dissipation of wave energy at the coast is highlighted and termed an “energy conversion zone”. From this perspective, the coastal engineers were particularly concerned about the “stability” of the Wadden Sea islands, *Halligs* and sand banks in the context of a negative sediment balance, potentially accentuated through anthropogenic climate change. The WS2100 strategy is understood as a continuation of previous plans dating from the 1980s and earlier to stabilise the coast through the construction of dams between the islands and the mainland:

The idea of our fathers was ... we need to stabilise [the Wadden Sea], we build dams ... and in the eighties ... we must build a dam here in the south, here to Pellworm, to cut off the current here, so the Wadden Sea wouldn't be washed out even more. That is the process, which has been discussed over many decades. (I_C1)

Building dams across the Wadden Sea, as suggested here, is widely recognised to be incompatible with both national nature conservation objectives and international commitments, and would lead to large-scale loss of habitats and deterioration of the ecological value of the coastal ecosystem. It is nevertheless significant that the WS2100 process is approached against the background of these previous discussions where structural hard engineering interventions have been actively considered and are still understood to be technically feasible.

Indeed, it was agreed at the beginning of the WS2100 process that the construction of dams would not form part of the discussion. This agreement was interpreted as a significant concession. In return, the nature conservationists accepted the primary dyke-line as the landward boundary of the WS2100 study area. Whereas coastal protection officials identified practical considerations militating against large-scale coastal realignment initiatives in the medium term, the decision not to include the primary dyke-line within the strategy discussion is described as a “political decision”, indicating that more fundamental aspects relating to the symbolic importance of the dykes as a boundary line also played a role (Hofstede & Stock, 2016; also Fischer, 2011). An interviewee describes this deliberate process of excluding both topics from the strategy discussion process as a balancing act, where both sides were required to make concessions.

With regard to two topics ... it was agreed from the beginning that we would not tackle them, because they do not belong in this strategy and are highly political ... Both sides had a bitter pill to swallow. There was also a certain justice there. (I_C2)

As a consequence, alternative approaches to coastal protection, including the selective opening of the dykes, were not to form part of future scenarios. This act of boundary-making is particularly significant in the context of the well-known work of a prominent Wadden Sea biologist, promoting alternative and more dynamic approaches to coastal management (Reise, 2015). Among other measures, Reise has advocated the creation of lagoon landscapes behind the dykes, allowing seawater to cross the dyke boundary in a controlled manner in times of storm floods. The spatial and as a result thematic scope of the WS2100 strategy was thus structurally bounded by a decision to maintain the primary dyke-line as the landward boundary of the geographical area under discussion (Hofstede & Stock, 2016). The appropriateness of alternative coastal protection measures in place of, or complementary to, the primary dyke-line was considered non-negotiable within the context of the WS2100 strategy, indicative of substantial resistance to coastal realignment on behalf of the authorities responsible for coastal protection. This is particularly noteworthy given the long-term time horizon of the strategy. A nature conservationist, centrally involved in the WS2100 strategy, noted that it would be necessary to include the ecological relationships between the Wadden Sea and the land behind the dykes as well as the question of opening the dykes in future strategies. He argued however that it is necessary to take an incremental approach as “one cannot go three steps at once ... for the reader of this strategy, the coastal population, it is already a big step” (I_N1). A local representative of a nature conservation NGO similarly argued that, “there are ... people who say ... lets open the dykes, give space to the water ... but ... the population is not far enough ... that they can discuss it” (I_N2). The above interview extracts indicate how any perceived challenge to the established “hold-the-line” coastal protection strategy and associated metageography of a dyke-protected, fixed and secure coastline is viewed as a culturally sensitive if not political issue and one that would need to be approached tentatively over a longer period of time. It is possible, however, that the nature conservationists underestimate the potential for open and constructive dialogue with the coastal communities on this issue.

3.2 | The Wadden Sea as a space for nature

The WS2100 strategy document classifies the habitats and landscape types of the Wadden Sea in terms of a strict classification derived from the EU Habitats Directive with indications of the relative area occupied by each habitat type. This employment of mutually exclusive bounded-space categories reflects an administrative and legal desire for order and organisation, but serves to emphasise static attributes and characteristics, in contrast to the emphasis on flow and dynamic change central to the nature conservation philosophy of the National Park.

From the perspective of nature conservationists, the Wadden Sea is perceived as a protected space where natural processes can unfold with a minimum of human disturbance. The “whole of nature” including “all animals, plants and

ecosystems” is understood as worthy of protection in its own right (WS2100, p. 63). The conservationists’ perspective hence posits “nature” as distinct and separate from the social world, following its own laws and internal dynamics. Consequently, objectives are formulated without reference to socio-cultural perceptions and understandings of the Wadden Sea ecosystem and landscape. A holistic view of nature as an integrated whole is evident, elevating “nature” to the status of subject within the strategy-making process.

As a consequence of this interpretation of Wadden Sea nature, the climate adaptation scenarios of WS2100 are evaluated from a passive “hands-off” approach to nature conservation, where any intervention should be restricted to what is necessary “to ensure that nature of the Wadden Sea has the necessary freedom to develop following her own laws” (WS2100, p. 63). This non-interventionist nature conservation philosophy is enshrined in the laws governing the national park. It thus applies within the boundaries of the National Park, which are in turn defined so as to exclude all inhabited islands, *Halligs* and coastal areas. Within this exclusive, bounded space for nature, it is argued that “nature should “decide” where tidal channels flow, where a sand bank lies or does not lie, if a primary dune grows on the beach . . . where and how a new island develops” (WS2100, p. 63).

This metageographical emphasis on fluidity, flow and transformative change over time within a natural space stands in marked contrast to the coastal engineers’ desire for stability and fixity. It is nevertheless recognised that the capacity of the Wadden Sea ecosystem to flexibly adapt to changing sea-levels and in particular habitats or species to migrate landwards is constrained by the presence of the dykes as a coastal barrier. From this perspective, the preferred adaptation option of the WS2100 strategy, allowing the Wadden Sea to “grow” through sand nourishment represents a significant challenge to the established nature conservation orthodoxy (I_C3). Nature conservationists envisage the deposition of sand at the boundaries of the system, relying on natural processes to distribute it to where it is required:

The option is to give the Wadden Sea the possibility to do it itself . . . that would perhaps mean that one deposits a sand depot in front of the Wadden Sea and that it comes into the space where the waves begin to disturb and transport the sand and then it is like before. (I_N1)

In this way the need for active intervention is seen to be minimised and the main work to be done is transferred to the ecosystem itself. A coastal engineer, however, questions whether this approach will lead to desired and foreseeable outcome: “If I lay sand . . . 1,000m³ at this point, what will nature do with it? Will it be to the benefit of the Wadden Sea? Because nature deposited it where it was supposed to go?” (I_C3).

3.3 | The Wadden Sea as a cultural landscape

Although drawing primarily on the scientific knowledge and professional expertise of the coastal protection and nature conservation policy communities, the evocation of the Wadden Sea as a cultural landscape and a unique area of human settlement features prominently in the text of the WS2100 strategy. The metageographical narrative of the Wadden Sea as a cultural landscape is framed through two core concepts, both employed on multiple occasions within the text; *Heimat* (home-place) and *Lebensraum* (living space). The core statement of the strategy quoted above calls for the protection of the Wadden Sea “as our *Heimat*”. The concept of *Heimat* is employed, evoking cultural meanings associated with a home-place or “home-*scape*”, the place where one comes from (Ratter & Gee, 2012). In this case, the reference to the coastal landscape as “our *Heimat*” further indicates an implicit recognition of the particular role of the islands and *Halligs* and Frisian culture in the cultural identity of the region at a wider scale. In the ministerial foreword to the strategy, it is more explicitly stated that the Wadden Sea is “an inseparable component of the *Heimat*” of approximately 150,000 people living in or at the Schleswig-Holstein Wadden Sea (WS2100, p. 5). In this way, the coastal communities living behind the mainland dykes are incorporated within the socio-cultural framing of the strategy from the outset. The term *Lebensraum* (living space) is deliberately employed within the strategy text to create a semantic bridge between socio-cultural and ecological narratives. In an ecological sense, the term *Lebensraum* is synonymous with habitat and in the document it is used to differentiate between the various habitats, which together comprise the Wadden Sea ecosystem. The term is, however, also used to refer to the Wadden Sea as a living space for its human inhabitants and in particular to reflect a specific portrayal of adaptive society–environmental relations, as reflected in the following extract:

The Wadden Sea living space (*Lebensraum*) mirrors the common cultural heritage of the struggles of a ... society, which has always adapted to this rich and fertile, but also dangerous ... maritime environment. (WS2100, p. 11)

A representative of the island and *Hallig* communities further stressed: “*Lebensraum* is not only a living space for all the birds, plants which are described, but also for us” (I_IH_1). In particular, it is argued that the inhabitants of the *Hallig* islands have developed “a very special relationship” with their living space or habitat, with “the struggle with the *Blanke Hans*³, comprising an important part of their historical consciousness” (WS2100, p. 45). More specifically, the strategy refers to the role of catastrophic storm flood events in 1362 and 1634 in shaping the current structure of the coast, emphasising the centrality of coastal protection for the inhabitants of the region. Indeed, somewhat paradoxically, given the long-term timeframe of the strategy, the Wadden Sea cultural landscape is referred to almost exclusively in terms of its settlement history. Reference to a regional development strategy for the *Hallig* islands comprises an exception here. This strategy reflects the status of the *Halligs* as a development zone within a UNESCO Biosphere Reserve. It is argued that the “development zone represents a cultural landscape, in which human use and nature are in harmony with each other” (WS2100, p. 46). The biological concept of habitat is translated to a societal context to position the *Hallig* communities as at one with the natural ecosystem of the Wadden Sea. This interpretation indicates an element of geographical determinism, implied in the suggestion that human societies relate and adapt to their environments in a similar way to birds and plants to their habitats. The term cultural landscape is, however, employed to spatially position the inhabited *Halligs* outside of the natural landscape of the Wadden Sea. In this way, a strict spatial division between the spheres of nature and culture is maintained, despite the accordance of a special position to the *Hallig* communities.

The specific meaning employed within the text notwithstanding, the use of the term *Lebensraum* may be viewed as problematic given its association with the “blood and soil” ideology of German National Socialism (e.g., Radkau & Uekötter, 2003). The concept of *Lebensraum* was specifically employed during the Nazi era with reference to a wildly ambitious plan for the large-scale reclamation of the Wadden Sea to create new lands for the German people (Trende, 2011). From this perspective, the use of the ideologically charged term *Lebensraum* within the context of this strategy is somewhat surprising.

4 | BETWEEN FIXITY AND FLOW, NATURE AND CULTURE

The above empirical analysis has identified distinct metageographies of the coast as reflected in the WS2100 climate change adaptation strategy and the qualitative interviews with key actors. The institutional and disciplinary perspectives of coastal protection and nature conservation are associated with clearly distinguishable geographies of how the coast is and should be in the future. A third perspective on the Wadden Sea as a cultural landscape furthermore entails its own specific narrative framing of nature–culture relations. A marked contrast is evident between the coastal engineers’ focus on fixity and stability and concern to control and regulate natural processes in a predictable manner and the conservationists’ desire for processes of change within the Wadden Sea to be determined “by nature” rather than human intervention. Boundary-making practices, including the delineation of the national park boundaries to exclude all areas of human settlement, nevertheless ensure a strict separation of bounded mutually exclusive spaces for nature and culture. At a more fundamental level, the approach to nature conservation adopted by the National Park is predicated on an essentialist understanding of nature as separate from the social world, providing limited scope for a more nuanced understanding of the complex interweaving of nature–culture relations. A certain tension is nevertheless evident within the text of the document between a compartmentalising approach (nature here, culture there) and a more holistic understanding of the Wadden Sea as cultural landscape with a long and dramatic history of coastal communities adapting to their environment. The inhabited *Halligs* are identified as a “cultural landscape”, in binary opposition to the natural space of the National Park. Elsewhere, the Wadden Sea itself is identified as part of “our *Heimat*”, and thus located within the cultural sphere as well as a distinct and mutually exclusive natural sphere. Through the use of the problematic and geo-deterministic terminology of *Lebensraum* an attempt is made to bridge these two spheres, with the suggestion that the *Hallig* communities have a similar “natural” relationship to their habitat or living space as the birds and plants of the Wadden Sea ecosystem.

5 | CONCLUSIONS

This paper has demonstrated the relevance and application of the concept of metageography in an environmental management context. Moving beyond existing studies focused primarily on questions of state-centric territorialism, this study has

shown how individual metageographies may reflect specific understandings of nature–culture relations as well as the disciplinary perspectives of individual policy sectors and communities of practice. A metageographies perspective can furthermore help to shed light on the boundary-making processes whereby constructed divisions of the landscape into natural and cultural spaces become reified and taken for granted. The case study presented in this paper demonstrates the need for policy strategies to engage with multiple cultural geographies of the coast, and the spatial implications of distinct stakeholder perspectives. Coastal protection and nature conservation constitute regionally specific and culturally situated practices, which cannot be addressed solely from individual disciplinary-specific (natural sciences, coastal engineering) perspectives. Within the Wadden Sea context, the WS2100 strategy is significant for broadening the frame and incorporating multiple and diverging perspectives within one strategy. Nevertheless, it can be concluded that future strategies at the Wadden Sea and elsewhere should seek to more explicitly acknowledge the distinct metageographies underlying different stakeholder perspectives and seek to work with them, opening a space for the emergence of new and alternative socio-spatial imaginaries for the future, commensurate with contemporary challenges.

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ENDNOTES

¹ The following categorisation of interview transcripts is employed: S – scientific expert, C – coastal protection, N – nature conservation, IH – island and *Halligs*.

² Low-lying marsh islands with houses built on dwelling mounds, submerged under floodwaters up to 45 times per year. They host a current population of approximately 280 people, living on seven inhabited islands (MELUR, 2015).

³ Regional personification of the North Sea storm floods.

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