REGULAR PAPER

WILEY | THE GJ | Royal Geographical Society with IBG

Everyday life and environmental change

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This paper explores how daily changes in the physical environment intersect and connect with people's everyday lives, routines and practices in the Maldives. Day-to-day life is often regarded as mundane and ordinary, and therefore not particularly worthy of study. As this paper argues, however, the everyday is central to understanding how environmental change occurs and how people respond to it. Much recent work has challenged the ontological separation of the human and non-human, yet approaches to examining environment–everyday connections have, to date, been largely unidirectional, focusing on either how the environment impacts on human practices or is impacted by them. Using the notion of the everyday, this paper explores how "impacting on" and "impacted by" are entangled, ongoing cyclical processes that unfold daily. It draws on a series of innovative methodologies conducted with island-base communities to examine three key changes in the physical environment that are taking place in the context of the recent and rapid development of tourism on inhabited islands: sand excavation and erosion, the appearance and removal of rubbish and debris, and the expansion of the built environment. The paper reveals the significance of these day-to-day changes and the ways in which they are accommodated by, and incorporated into, the spatial and temporal dimensions of people's daily practices. It concludes by suggesting that an appreciation of the everyday can contribute to new understandings of human/non-human entanglements.

KEYWORDS
building construction, everyday life, Maldives, sand erosion, visual ethnographies, waste management

1 | INTRODUCTION

In recent years, there has been a rapid growth in the exploration of the everyday in the social sciences (Ehn et al., 2015). However, in spite of this rise, there has to date been little consideration of the everyday in relation to environmental change (Lucas et al., 2015). Specifically, there is very limited knowledge of the interconnections between day-to-day changes in the physical environment and people's regular, routine, and quotidian activities. Drawing on a case study from an inhabited island in the Maldives, this paper addresses this knowledge gap by showing how daily changes in the environment intersect with the everyday lives of island-based communities. In doing so, the paper recognises the ways in which exploration of the multiple and diverse interconnections and entanglements of the human and non-human have been at the forefront of much geographical research in recent years (Panelli, 2009). However, it also shows that, to date, there has been little work on how these entanglements are produced, encountered, and negotiated in the everyday. The article highlights how an

appreciation of the everyday can offer new understandings of these nature–society interconnections. Specifically, it reveals the everyday tensions and contestations that arise through the production of these entanglements, how they are encountered and negotiated on a daily basis and the various affordances that they provide in the process.

The Maldives represents a timely and important case study as it "exemplifies the challenges and opportunities facing small island states under environmental change" (Stojanov et al., 2017). Furthermore, the Maldives is undergoing rapid economic changes due to the recent expansion of a guest-house industry that allows international tourists to stay with local people, whereas previously they were confined to resorts established on uninhabited islands. This more localised economic development, specifically in the growth of the tourism sector, is having significant impacts on the form of human/non-human entanglements as changes in the physical environment are impacting on, and being affected by, people's daily lives (Hirsch, 2015). Our analysis explores people's everyday lives in relation to three key ways in which the physical environment is changing daily: sand excavation and erosion, the appearance and removal of solid waste, and the expansion of the built environment. We argue that studying the everyday is essential to understand how change occurs and how people's daily practices respond to it. The key challenge here is how best to illuminate shifting interconnections between physical environments and people's activities, changes that are so "everyday" that they often appear as self-evident and subsequently go largely unnoticed. From this perspective, islands are less places "that seduce outsiders imagining [them] from a distance (e.g., escape, utopia, exoticness, boundedness, etc.)," and more locations where the "mundane, but not less distinct, embodied experiences that islandness demands and affords" are played out (Vannini & Taggart, 2012, p. 227).

Everyday life is understood in multiple ways. Primarily, studies focus on the routinised ways in which individuals and groups organise themselves on a daily basis (Edensor, 2010; Eriksen et al., 2015; Highmore, 2011). Day-to-day life has its own rhythms and flows that are familiar and often mundane. It is because of this ordinariness that everyday life tends to unfold in an unreflexive manner (Middleton, 2011), with daily, regularised practices often internalised or embodied to the extent that they can appear "natural" or unremarkable to both participants and observers (Bourdieu, 1977). In these respects, everyday life can seem, at first glance, unremarkable. And yet, according to de Certeau (1984), everyday life can also be a realm of mundane oppression where inequalities and disadvantages between individuals and groups become normalised and taken for granted. Sometimes, reflection by marginalised actors of their social positions in the everyday can prompt them to engage in forms of resistance, although these actions too can pass unnoticed (Masaki, 2006). Other times, actors might attempt to gain more direct control over their lives, as expressed in terms of the daily triumphs and failures of getting by (Norgaard, 2011), building livelihoods (Gupta, 2007), or engaging in transformational forms of politics (Maniates, 2012).

Despite these crucial dynamics, the everyday has been little considered in research that focuses upon environmental change. Indeed, environmental discourses have not lent themselves to a rigorous exploration of daily life, as it tends to be seen as less relevant to the complex task of understanding the intricate ways in which human activities and the physical environment are interconnected. One reason for this is the perception that the everyday mostly concerns individual actions in the "here and now" and therefore is simply not relevant to the grand task of understanding broad forces of change within fields such as the climate and sustainability sciences that are future oriented, often dealing with the medium to long term. Maniates (2012, p. 121) aptly sums up this insight by suggesting that the lack of everyday research in studies of environmental change lies in the presumption that

> everyday life is, after all, so 'everyday,' even when marked by small acts of environmental stewardship: it is uneventful, sometimes idiosyncratic, often banal, and wholly incommensurate with the magnitude of change required by any transition to sustainability.

An additional reason for scholarly neglect of the everyday in studies of environmental change relates to the tendency to separate academic disciplines into research "silos." According to Castree (2014), these disciplines include environmental economics, behavioural psychology, political science and legal studies, management and business studies, environmental planning and sustainability, and vulnerability and adaptation science. However, climate change research has historically overlooked disciplines such as social and cultural geography, sociology and anthropology, fields from where most research into everyday life has derived. These omissions have led to calls by scholars for an increased role of the humanities in the study of environmental and climatic change (Jackson, 2015).

In spite of the perceptions outlined above, there is growing awareness that, far from being "ordinary" or "mundane," and therefore of little consequence to research and policy-making, the study of everyday life can generate important understandings of how people's daily practices are influencing changes in the physical environment and how these are, in turn,

being resisted, accommodated, or borne through their incorporation into people's daily activities. In this manner, it is possible to investigate how environmental change affects people as a lived experience, how people know that environmental change is happening, and how they think and feel about it (Brace & Geoghegan, 2010). This paper builds on these insights by showing that exploring the everyday can illuminate ways in which the dimensions of "nature" and "society," far from being separate, are intimately connected and sustained on a day-to-day basis, representing and precipitating conflicts and tensions between individuals and groups, and presenting opportunities and constraints to those encountering them daily. In doing so, it moves beyond a focus on impacts, which have tended to dominate studies of environmental change in the Maldives to date, to consider gradual, incremental changes in people's immediate, physical surroundings. These localised changes, while attracting relatively little attention from international and national decision-makers, can be of considerable significance to those who are producing, and are affected by, them.

The rest of this paper is structured as follows. The next section outlines some of the main ways in which nature–society connections have been understood in geographical scholarship to date, before considering the extent to which these connections have been examined in relation to studies of the everyday and the physical environment. This is followed by an introduction to the Maldives case study and the research methods employed. Section 4 introduces the diverse everyday entanglements that are evident on the islands and the kinds of conflict that they represent and relate to. Then, in Section 5, the article presents a case study from one island to show how the immediate physical environment is changing on an ongoing, ceaseless basis, and how such changes are closely interconnected to people's everyday practices. To bring out the daily, cyclic nature of these interconnections, this section of the paper is presented in a "day-in-the-life" narrative style that follows the course of a single day. What we see during this period is everyday, routine encounters and negotiations with the diversity of human–environment entanglements. While some of the processes underpinning these, such as sand dredging and seagrass removal, may not always take place daily, they are, nevertheless, encountered on a daily basis. The paper concludes in Section 6 by illuminating how an everyday lens can contribute to understandings of human and non-human entanglements.

2 | BRINGING THE EVERYDAY INTO ENVIRONMENTAL CHANGE

For some time now, geographical work has challenged the long history of separation of nature and society, or human and non-human, in societies in the West, focusing on how they are intimately connected in multiple and varied ways (Panelli, 2009). Much of this work is grounded on the idea that geographical research should aim to "re-animate the missing "matter" of landscape, focusing attention on bodily involvements in the world in which landscapes are co-fabricated between more-than-human bodies and a lively earth" (Whatmore, 2006, p. 603). From this perspective, then, "'the human' [is] no less a subject of ongoing co-fabrication than any other socio-material assemblage" (2006, p. 603) and attention is drawn to the affective capacities of "nature" in general (Lorimer, 2012).

Some of this assemblages work aims to give equal treatment to the human and non-human realms, such as that examined in "symmetrical assemblages" (Robbins & Marks, 2010, p. 183), in which "all of the assembled players are active in the outcome and impinge upon the dynamics of the system." For example, in their analysis of Glasgow's sewerage system, Jones and Macdonald (2007) analyse how "unruly" water has been "disciplined" over time (in the Foucauldian sense of the word). Other work, however, considers nature–culture relations via a more intimate framing. This includes that of Swyngedouw (1999, p. 445), who adopts the term "socionature" to explore how something as commonplace as a glass of water embodies multiple and interrelated "tales of socionature as hybrid," constituting socio-ecological, political, physical and chemical processes acting together and at different scales. In this sense, "through their reaching into one another, through their 'prehensions' or graspings, beings constitute each other and themselves. Beings do not pre-exist their relatings" (Haraway, 2003, p. 6).

As this scholarship shows, there are multiple ways in which the "human" and the "physical environment" are entangled. However, despite this recognition, there is limited examination to date of how a focus on the everyday can provide new insights into these interconnections. Indeed, when the existing literature on how day-to-day life connects with the environment is examined, what we see is a tendency to take a unidirectional stance, focusing on how either the environment impacts on human practices, or is impacted by them, thus reflecting a separation between the human and non-human. One strand of research, which we have termed "impacting on," focuses on how everyday activities and behaviours create or affect processes of environmental change. The other strand, which we refer to as "impacted by," considers how people's everyday activities are shaped by environmental change and variability. Below, we consider these two approaches in turn.

The work that focuses on "impacting on" derives primarily from the interdisciplinary field of sustainability science and policy. In general, it considers how the cumulative effects of people's everyday activities and practices, such as disposing

of household waste or driving to work, can lead to wider changes in the environment, or, to put it another way, the physical reconstitution of nature as part of the emerging Anthropocene (Castree & MacMillan, 2001). To illustrate, while the act of daily showering is seen as unlikely to produce an environmentally significant outcome when viewed in isolation, the overall effect of the normalisation of daily showering in certain societies has a large impact in terms of energy and water use (Hand et al., 2005). In other words, while showering is "convenient" in the sense that it is quick, and therefore fits well into the timeframe of a busy lifestyle, and relates to ideas around cleanliness, the material and technological resources required to sustain it are significant. Moreover, as Redclift (1996) points out, current approaches aimed at tackling such forms of consumption tend to take existing commitments and "ways of life" for granted rather than questioning the underlying collective ordering of daily life.

A recent theoretical innovation in the "impacting on" field has been the move away from consideration of the cumulative effects of the actions undertaken by individuals towards how people are positioned in relation to wider social contexts of socio-technical systems and norms (Evans, 2018). In general, these perspectives show that environmentally significant actions can be deeply engrained in people's daily routines, but are also potentially malleable and open to the possibility of change (Kurz et al., 2015). This is because such behaviours are neither the outcomes of individual choice, nor entirely shaped by wider societal arrangements, but rather are mutually constitutive of both agency and structure (Carr, 2008; Giddens, 1984). Research aims have thus been redirected to understand how people's environmentally significant behaviours persist and are reproduced, the processes through which actors are "recruited" into performing them, and the socio-historical trajectories through which they have become established or derailed, as normalised aspects of everyday life (Shove et al., 2012). These insights are important because they can inspire policies and interventions that can disrupt and change the "daily flow" of everyday life, thereby shifting society towards a more sustainable set of pathways (Evans, 2018).

In contrast to "impacting on," research into "impacted by" is primarily positioned within the climate change adaptation and resilience literature. It concerns how diverse individuals and groups anticipate and respond to environmental change in their established daily routines, thus placing emphasis on how nature affects human cultures. Studies in this research strand explore climatic variability over different timescales, from the daily and familiar to the infrequent and unusual, and between different geographical areas. For example, Böcker et al. (2013) investigates how people's daily travel behaviours are affected by different climatic parameters such as precipitation, temperature, and wind. He shows how daily shifts in weather have significant impacts on mobility decisions, including modes of transport chosen, frequency of journeys undertaken, travel times, and routes. In relation to more infrequent and profound changes, Safra de Campos et al. (2017) explores how the day-to-day mobility patterns of small-scale famers in northeast Brazil changed as a result of a major drought experienced in that region over a three-year period. Here, a range of adjustments to daily movements related to agricultural production and consumption, as well as trips to visit relatives, church, and friends. And, in terms of geographical change, Fuller and Bulkeley (2013) consider alterations in people's daily routines and rhythms when they move from a temperate to a hotter climate, as they seek to reconfigure their physical comfort levels.

As stated above, "impacting on" and "impacted by" arguably represent the two most prominent ways in which everyday–environment relations have been understood in the literature to date. However, other studies suggest ways of exploring nature–culture entanglements that relate more to the everyday dimensions of socio-natural assemblages. Indeed, as White (1995) has shown through an example of his own experiences of office-based work, nature is something that is intimately connected to himself and the places that he inhabits on a day-to-day basis, even the distant mountains that are visible from his office window. As White writes:

> I cannot see my labour as separate from the mountains and I know that my labour is not truly disembodied. If I sat here and typed all day, as clerical workers type, without frequent breaks to wander and look at the mountains, I would become achingly aware of my body … My body, the nature in me, would rebel (1995, p. 184).

In this sense, nature "facilitates, limits, threatens and improves" everyday life (Anderson, 2015, p. 161). Nature, as stressed in social practice theory (Shove et al., 2012), is not something separate from everyday existence, but rather is part of an assemblage of "natural" and "cultural" things that actors draw together and weave during the daily performances of their routinised activities.

This paper aims to build on these insights in two main ways. First, it explores how nature–society entanglements are produced and sustained on a day-to-day basis and the conflicts that they represent and precipitate for different individuals and groups. Second, we are interested in entanglements, not just in an ontological sense, but also what entanglements *do* on a daily basis. In other words, we are interested in the affordances that people's daily encounters with nature–society entanglements provide, or the functional, social, and emotional opportunities and restrictions that they offer on a day-to-day

basis (Kyttä et al., 2018). Moreover, following Phillips (2017, p. 40), we see encounters "not as isolated, immediate meetings between separate bodies, but as intimate tangles – interlacings of multiple threads through which bodies inhabit and remake worlds." In these ways, a focus on the everyday can lead to further understandings of how nature–society entanglements are encountered and negotiated.

3 | CASE STUDY AND METHODS

The Maldives is a small island state in the Indian Ocean. While it consists of over 1,100 islands, its population of 400,000 people inhabits only 188 of these, and a third of its people live on just one island, the capital Malé. Although classified by the United Nations as a middle-income country, poverty rates are around 15% and its unemployment rate stands at 28%. Since the first international tourist resort opened in 1972, the Maldives has become renowned as an exotic and luxury tourist destination. Over 1.2 million tourists visit the islands each year and tourism accounts for 30% of the country's gross domestic product (UNDP, 2014). There are now over 130 resorts (Ministry of Tourism, 2015) and the government has approved the building of a further 70. The number of tourists arriving each year has increased at a rate of 10% over the past five years, and this figure is set to rise further with the development of a new runway at Velana International airport in Malé, and a change in government policy that now allows the establishment of guest houses on inhabited islands.

In the case study that follows, many of the changes examined are a result of rapid growth in international tourism on inhabited islands due to the recent expansion of the local guest-house industry. This expansion is highly significant as, prior to 2009, international tourists were only allowed to stay in resorts, and these could only be established on "uninhabited islands," separated from Maldivian populations. However, the 2009 governmental ruling allowed Maldivians to construct guest houses on inhabited islands and market them to international tourists. Previously, economic development within and between island-based communities was highly unequal. It is now anticipated that guest-house development on inhabited islands will enable the benefits from tourism to be more widely distributed among the local population. Additionally, the high cost of staying at a resort had meant that holidaying in the Maldives was prohibitive for many potential tourists. However, with cheaper guest-house accommodation now available, a wider range of visitors can travel to the Maldives with the added benefit of being able to live among the local population and experience Maldivian culture.

Overall, there is a great deal of support for these changes and the economic benefits that they bring to inhabited island populations. They are viewed as a key to the future of islands, since providing younger generations with local employment has given them an incentive to remain on their home islands and not migrate to Malé. However, these benefits do not mean that guest-house industry development on inhabited islands has been without controversy. For example, the day-to-day management activities of resorts have conflicted with island-based communities due to differing interests in, and uses of, the physical environment (Arnall & Kothari, 2015). Such tensions are particularly evident where major international resorts are located near to the local population. These frictions are compounded where tourism managers seek to alter and manipulate local sea- and land-based environments to suit the expectations of high-paying tourists. For instance, resort managers dredge sand to create swimming lagoons for tourists, causing erosion and dispossessing neighbouring island-based communities of their access to the shoreline. In this way, the imperative to preserve the so-called "natural" beauty of the Maldives, that attracts high-paying resort tourists (Ministry of Tourism, 2015), ironically requires the constant manipulation and management of space. As we have argued elsewhere, "this runs contrary to the belief that tourism industries are exerting an increasingly benign influence on local environments following the emergence of 'sustainable tourism' in recent decades" (Kothari & Arnall, 2017, p. 980). There are also significant social changes taking place, which, while not forming the focus of this article, nevertheless include concerns around the preservation of island traditions, religion, and culture.

The empirical research on which this article is based was carried out during multiple short-term and extended visits in 2017 and 2018 on four inhabited islands located in North Malé and Dhaalu atolls.[1] These islands were selected based on their proximity to major "uninhabited" tourist resort islands and as "pioneers" in the development of a local guest-house industry. The islands have relatively low populations, of between 600 and 1,200 residents each, and livelihoods are mostly based on tourism and tuna fishing. In these localities, significant and protracted alterations of local landscapes through, for example, sand dredging, land reclamation, and habitat destruction and recreation have resulted in major changes in physical environments in recent years. During the 18-month period of the project, longer visits to the islands of a few weeks each were undertaken by a research assistant and shorter visits by the project team were made over the entirety of the research project. These helped to ensure that ongoing changes in the physical environment and people's lives were observed and explored on a sustained basis.

Although it has enormous potential, studying the everyday can be challenging. This is because, as Brinkmann (2012, p. 17) suggests, "the difficulties of pinpointing everyday life are probably related to the fact that everyday life is our paramount reality." Uncovering the seemingly mundane therefore requires an ethnographic sensibility and an ongoing engagement with lives unfolding in real time. According to Maffesoli (1987, p. 79), this means that the research is "focused on understanding the human experience, and the researcher displays conceptual audacity by making the mundane intellectually interesting and challenging." Drawing on approaches developed in a variety of disciplines, notably anthropology (Pink, 2012), sociology, and geography, everyday research aims to go beyond the often "thin" and "tokenistic" participatory research common in development policy research to provide a deeper account of the day to day. The aim is to "reveal," "enliven," and "animate" mundane island spaces "through a (hopefully) evocative and impressionist rendition strategy" (Vannini & Taggart, 2012, p. 228).

To generate insights into everyday practices on the case study islands, the empirical research combined and developed a series of innovative visual and textual methods. Visual methodologies included taking photos and videos to capture everyday activities and engagements with the environment, including changes in the built environment. These activities were supported by four photographic workshops, designed to stimulate further discussions among research participants (Wang et al., 2004). Participant observation was undertaken to record and observe people's everyday lives and connections with their environment, and the "go-along" (Kusenbach, 2003) technique of data collection was also employed. Here, the researcher asked questions as they moved alongside informants while they actively inhabited their social and physical contexts in their everyday lives. These methods had the benefit of increasing respondents' participation, of uncovering the mundane and routine, of breaking down more generalised understandings of environmental change, and documenting what islanders actually do as opposed to how they represent the places where they live (Vannini & Taggart, 2012). Finally, interviews were undertaken with resort and guest-house managers and workers, tourists in resorts and guest houses, members of island-based communities, local councillors, and representatives of government ministries. These revealed perspectives on changes in the physical environment and daily activities, and gathered contextual data on economic development, environmental sustainability, and livelihood strategies. Prior to the commencement of the research, ethical clearance was gained at the researchers' home institutions. Interviews were conducted in Dhivehi and English as appropriate and, with permission of the research participants, were recorded for later transcription.

4 | EVERYDAY ENTANGLEMENTS ON A MALDIVIAN ISLAND

This section moves the analytical lens towards gradual, incremental changes in the immediate, physical environment by outlining three important alterations on the case study islands that take place daily. These are as follows: losing, making and maintaining beaches; waste, rubbish and debris in the sea, and washing up onto coastlines; and changes in the built environment and infrastructure. These changes are influenced by ongoing, everyday human interventions to manage the physical environment. Their examination reveals them as sources of tension and conflict over competing uses of the environment, particularly where resources are shared. Indeed, responses to day-to-day environmental change might include resistance (Scott, 11985), but also compliance and evasion (Kerkvliet, 2009). Importantly, studying the "messiness" of these everyday practices and interactions can illuminate the social conditions, political choices, historical factors, and power relations between various actors (Back, 2015). The entanglements described are characteristic of island-based environments, being surrounded by sea, and having extensive coastlines and small, restricted land areas.

Beach and coastal erosion, processes by which sand is picked up and transported elsewhere, happens everywhere and ceaselessly in the Maldives. Although erosion, and ocean currents, tend to be viewed as "natural" processes, movements of water and sand can be considerably affected by physical infrastructure development, such as harbours and land reclamation. Where sand is being eroded from, and where it is accumulating, are important, especially for tourist establishments keen to maintain a beach for tourists. For those individuals and groups that have economic interests in the maintenance of beaches, this necessitates an almost daily response to the problem of erosion and the movement of sand.

International tourist resorts have long moved sand around daily using pumps and other large machinery to build up and maintain their beaches, and regularly raking and sweeping the beaches to remove debris, but also to spread the sand evenly across the beach. In addition, resorts can afford to carry out the expensive environmental impact assessments (EIAs) necessary to undertake large-scale interventions such as construction of seawalls or breakwaters. However, the increasing importance of guest houses to local economies has meant that island-based populations must also find ways to control the day-to-day movement of sand, albeit with limited resources. Many island councils are unable to commission an EIA, with each one costing around 120,000 Maldivian rufiyaa (about £5,500), and are therefore unable to get approval to construct large

physical defences such as groynes. Subsequently, with the limited resources they have available, guest-house owners have begun to make small-scale modifications to their coastlines, for example by constructing smaller groynes out of concrete and sandbags.

The second daily change to the physical environment is the accumulation of debris and waste, which is continuously being produced by multiple human and non-human agents and processes: ocean currents, practices of consumption, infrastructural development, travel and transport, and wind. Processes of managing waste by island populations, guest houses, and resorts are diverse. Resorts have the financial resources to buy in waste management facilities, such as incinerators or composters, to deal with the refuse that they produce. For waste that cannot be dealt with locally, resorts are obliged under Maldivian law to send it to Thilafushi, popularly referred to as "Rubbish Island," located beside Malé. On inhabited islands, in contrast, waste management facilities tend to be more rudimentary. Each island has a small rubbish tip to which residents, or local council contractors, transport refuse on a regular basis, and these piles are often set alight, which can result in unsightly, smelly smoke drifting over nearby homes and beaches, and across the lagoons to the resorts. Most islands also have basic waste management facilities where solid refuse is collected, separated, and sometimes recycled, and where organic waste is composted. Waste that cannot be burned or recycled is transported to Thilafushi, although most local councils can only afford to do this once a year.

These waste management processes are meant to be handled locally, whether waste is produced by resorts, guest houses, or local people. However, large quantities of it also wash up onto the beaches of resorts and inhabited islands on an ongoing, daily basis. People in island communities often blame resorts for the problem, accusing them of throwing their rubbish into the sea. This is especially the case when there is evidence on the waste itself to indicate that it can only have originated from a nearby resort. Such evidence includes resort company-branded items, like slippers and water bottles, or exotic foodstuffs, such as pineapple skins. When these items wash up on the shore of inhabited islands, local councils have complained to the nearby resorts and to relevant government ministries, providing them with photographic evidence that the waste can only have originated from the resort. However, they claim that their complaints are rarely taken seriously. Moreover, resort managers blame island communities for the debris that washes up on their beaches, pointing out that they are generating more and more waste due to guest-house development and rising populations. They also argue that since inhabited islands have limited resources for waste disposal, a lot of their rubbish is simply left unmanaged.

A steady process of economic development, particularly on those inhabited islands that have established themselves as tourist destinations, has resulted in the third ongoing change which relates to the built environment. New physical infrastructure is particularly evident, including land reclamation projects, harbours, buildings (both residential and guest houses), powerhouses, solar panels, boatyards, industrial zones, ice plants, water tanks (both public and private), groundwater wells, roads and thoroughfares, sea defences, and systems for sewage, running water, renewable energy, and energy transmission. In addition, the development of local amenities, including football pitches, playgrounds, and meeting areas, has taken place. To manage all this activity, many local councils have developed land-use and zoning plans, although the degree to which these have been implemented varies from island to island. On some islands, these developments are progressing in a relatively controlled fashion, whereas on other islands it is taking place in a much more unrestrained manner. Nonetheless, controlled or not, the rapid expansion of physical infrastructure on inhabited islands constitutes a significant change in the physical environment for residents, as well as a source of a series of secondary effects and outcomes on the surrounding land and sea.

The construction work takes place during the day, but also through the night when the weather is cooler. This ceaseless daily, noisy, and dusty activity has resulted in changes in the social, aesthetic, and physical life of islanders, and has also impacted on nearby resorts. In particular, the multisensory impacts on tourists staying near ongoing building and infrastructure work has become a source of tension between resort managers and the local population. The most frequently reported effect is the visual impact of unsightly island-based developments on the daily experiences of tourists based in resorts. Resort managers complain that the endless construction work to build and extend guest houses and houses "spoils" the view for tourists whose gaze from their pristine resorts now falls on numerous building sites replete with concrete mixers, scaffolding, and machinery. Additionally, Maldivian houses were previously single storey dwellings and therefore not particularly visually intrusive on the landscape, especially when nestled among a stand of trees. However, guest houses are now being extended upwards, often to five or six storeys, making them far more visible from a distance.

In some cases, island councils and resort managers have been able to resolve these types of conflict amicably. For example, an island resident explained how complaints had recently been made relating to a new boatyard developed on their inhabited island, which the resort claimed was spoiling the view from their specially constructed "wedding area." To settle this issue, the resort bought and paid for the planting of tall trees around the boatyard to block out the "unsightly" view of the facility. However, in other cases, pressure on local councils following complaints from resorts has led to

proposed new construction projects being prevented from going ahead. To illustrate, on one inhabited island, council members emphasised that large-scale projects, such as land reclamation, have been abandoned so as not to interfere with the activities of a resort and the tourist experience that it was trying to maintain. There are also internal conflicts over noise on inhabited islands between guest-house owners and local councils. For example, on one island, a large, outdoor diesel generator, installed to produce power for lighting of domestic residences, had been positioned alongside a newly constructed guest house. The guest-house manager complained to the island council that the facility was damaging his business as tourists were put off by the drone of the generator throughout the day and night.

In summary, the ongoing processes of beach and coastal erosion and management, waste disposal, and subsequent build-up of rubbish on beaches, and the development of the built environment, are entangled with each other and with people's everyday lives in complex and ceaseless ways. The changes in the physical environment explored in this section are daily, incremental, and cumulative. They are also interconnected, as an intervention to manage one aspect of the environment, such as the construction of a harbour wall, can produce an alteration in a different component, such as a change in the shape of the lagoon and an increase in coastal erosion. Taken together, these changes are significantly affecting the day-to-day experiences of Maldivians living in island-based communities, and are being incorporated into their daily practices. The following section illustrates the extent and depth of these interconnections through a study of environmental change and people's everyday routine activities loosely based on the progress of a single day. What is revealed here is the daily encounters with diverse aspects that constitute human and non-human entanglements.

5 | EVERYDAY ENCOUNTERS WITH NATURE–SOCIETY ENTANGLEMENTS

Each day, early in the morning, Amina gathers the rubbish in and around her house, loads it into a wheelbarrow and takes it to the island landfill. Fifty years ago, when she was a young child, there was much less waste and much of what there was ended up in the sea. Then the Island Council allocated various sites around the island for people to deposit their waste for collection. Today there is only a single rubbish dump and Amina must walk far from her home to discard her waste. She has been doing this since the Council stopped its regular waste collection service seven years ago. Although she thinks it will be an improvement when the planned new waste management centre is built, it means that she will have to walk even further to remove her rubbish.

Her daily route to the landfill site frequently deviates when sections of the path are closed or impassable due to ongoing construction of guest houses on the island. She remembers collecting firewood and coconuts from the "vaa," the island forest, twice a day, but it has since been cleared for the construction of new guest houses. There are currently 11 guest houses on the island and another six are in the process of being built. When she arrives at the landfill site, Amina discards anything she identifies as plastic at the edge of the dump, and then tips leaves and other combustibles from her wheelbarrow into the burning pit before returning home. She often spends some time separating her waste given how the organic and non-organic materials that make up the contents of her wheelbarrow often become entangled.

The fire in the rubbish pit burns continuously and acrid black smoke constantly drifts over the adjacent beach. Since the first guest house was established on the island in 2009, this part of the coastline has been demarcated as the "tourist beach." Reserved for tourists, this part of the shoreline is colloquially referred to as "bikini beach," a label connoting the very distinct dress codes of tourists. Amina, along with most other island inhabitants, is delighted with the development of guest houses, for tourists have brought economic growth, infrastructural development, and jobs. However, she feels that how tourists dress is unacceptable and says that this has created significant tensions on the island between guest-house owners keen to attract tourists and local residents who fear the denuding of their cultural more.

Every day, at mid-morning, the first group of foreign tourists arrive on the ferry from Malé to stay in the guest houses. They are directed to the designated "tourist beach" and politely instructed verbally and through written rules signposted at guest-house reception areas that alcohol is not allowed on the island and that they must be fully covered when walking through the town centre. However, most tourists visiting the island do not want to spend their days confined to the allocated beach. The attempt to keep them away from the locals has meant that the tourist beach is far from the guest houses and cafes, and tourists complain about having to walk lengthy distances in the heat to reach the beach. Additionally, the tourist beach is next to the burning rubbish tip. Many tourists thus arrive on the tourist beach and are unwilling and unable to tolerate the smoke and the smell emanating from the nearby refuse site. For these reasons, many tourists move between the tourist beach and the less malodourous North beach, which reaches its peak activity in the early afternoon. This beach is nearer to the guest houses, in front of the café, close to the harbour, and opposite the resort on the neighbouring island.

This shift in location from the officially designated beach has created significant problems. There are ongoing concerns about the safety of the tourists as the daily ferry and supply boats pass this beach to reach the island harbour, causing potential danger to anyone swimming in the lagoon. Moreover, the beach is under threat from sand erosion, the effect of which is marked by ever distant white buoys that indicate where the land used to be. Much erosion is exacerbated by the blockage of the incoming movement of sand due to the building of the nearby harbour, which enables tourists to arrive on the island, and by land reclamation. Guest-house owners also regularly dig out the submerged seagrass from the North beach lagoon to reproduce the pristine waters expected by tourists. This has caused further erosion as the grass helps to stabilise the sea bed and slow down the movement of sand.

In addition to these interventions and changes, the nearby luxury resort situated on the adjacent smaller island causes problems through its regular endeavours to build and maintain the beaches that face the inhabited island. Most significantly, large machinery is frequently deployed in nearby waters to dredge sand for beach enlargement and realignment. This practice causes disturbed sand to wash into the island's harbour, a process that creates difficulties for the entry of larger, heavier vessels. This has meant that the Council regularly has to pay to remove the sand. Yet, this subsequently and ironically provokes complaints from the resort that the dredger the Council hires is unsightly and emits a noise that disturbs their guests. Such daily activities are ongoing and have become part of everyday life on the island.

The movement of tourists to the North beach has also affected the spatiality of the island's infrastructural development, stimulating the construction of three guest houses on the North side facing the resort island. Their construction has led to new tensions between the Island Council and the resort. These latest building developments are between three and five storeys high, and so are glaringly visible from the resort, significantly altering the remote island aesthetic for resort tourists. Additionally, resort management reports that their guests complain about the incessant noise emanating from inhabited islands, sounds primarily related to construction work and the increasing number and size of noisy motor boats travelling to and from the island to transport tourists, workers, and goods. The growing population, a consequence of economic growth, has led to the production of other and louder sounds, notably the recently installed loudspeakers throughout the island that call residents to prayer five times a day and inform them of daily island news and forthcoming events. These noises disturb guests staying in the nearby resort, undermining marketing that promotes an "escape" from urban living and the virtues of "peace and quiet."

The everyday movements and routines of islanders are also changing. Before the arrival of tourists in large numbers, the North beach was regularly used by island inhabitants to swim and walk, and for children to play. Now, not wanting to occupy the same space as scantily clad tourists, the locals have been displaced. Every afternoon, Ashira, a teenage school girl, used to go with her younger sisters and brothers to the North beach to walk but now she goes to the western side "as there are women not wearing much" and "she doesn't like young boys to see women dressed like that." While there are fewer tourists on the western side, the beaches here are less attractive and harder to walk on due to the higher rate of erosion and the subsequent deployment of sandbags. What were once large sandy beaches have mostly been eroded and the lagoon is filled with rubble and rocks. There is also a sewage pipe and the flow of the current guarantees that much of the rubbish washes up on this side of the island, particularly during the south-west monsoon.

Although the North beach is now generally regarded as "out of bounds" for island inhabitants during the day, by dusk many tourists have returned to their guest houses. At this time, after their evening meals, islanders gather in the public spaces near the harbour replete with benches and rows of "jolies," hammock-like chairs. A few years ago, a powerful new lighting system was installed in this area, including floodlights that allow fisherfolk and other boat operators to continue their daily work activities into the night. However, as with the sound and sights by day that violate expectations of a pristine idyllic island holiday, the lights, visible from the resort, are construed by resort managers as intrusive. These bright LEDs clash with the "softer" resort lights that are designed to produce a romantic and calming atmosphere. Thus, the cosy, intimate, and convivial glow created in the resort is fractured by the glare emanating from the inhabited island. In response, recreation managers in the resort have adjusted the location of their regular night-time entertainment for tourists, moving them to the side of the resort furthest away from the neighbouring inhabited island.

The development of lighting in the harbour area means that island inhabitants gathered in public meeting points tend to stay out longer into the evening than they used to. During this time, islanders rest, relax, and engage in conversation, discussing local politics and the latest infrastructural developments taking place, with some of the men playing cards or dice games. By 9 p.m. most residents have returned to their homes. The additional lighting also means that the night-time glow of the burning rubbish tip is less visible than it previously was. However, by sunrise the following day, the smoke from the tip is once again visible, blowing out across the island's southern section. Almina is restarting her rubbish collection and will soon be transporting it in her wheelbarrow to the dump.

6 | CONCLUSION

As stated at the onset of the paper, while the nature–society divide has long been challenged in geographical scholarship, there has been little systematic analysis of how an everyday lens can further our understanding of how human and non-human entanglements are encountered and negotiated. Indeed, in the study of the physical environment, the everyday is often regarded as ordinary or mundane, and therefore not particularly worthy of study. This is in spite of the fact that routinised everyday practices, "the concrete and embodied strategies and tactics through which we put things into use" (Vannini & Taggart, 2012, p. 227), are central to constituting the lifeworld (de Certeau, 1984) of islanders. Focusing on the everyday, this paper has further revealed the limitations of unidirectional studies that focus either on how the environment impacts on human practices or on how human activities effect the physical environment. Moreover, it has provided additional evidence to challenge the problematic separation between a supposedly natural environment and human practices. For example, the waste discussed above is itself composed of an inseparable amalgamation of substances. Plastic bottles, leaves, paper, and seaweed are entangled, intertwine, and meld creating new matter with unique qualities. This matter is produced through a variety of daily processes indistinguishably environmental or human made, whereby waste is conjoined and washes up onto beaches because of winds, fishing, rain, cooking, tides, and washing. Thus, the process by which waste comes into being, and what constitutes waste itself, cannot be reduced to a natural or social process. Moreover, the movements of sea currents that in part make and deposit this waste are neither entirely natural nor human made, arising due to a mingling of environmental processes and human interventions, such as the construction of seawalls or harbours. And, as we have shown, persisting with the distinction between human and non-human obscures an appreciation and understanding of the very complex processes by which an island's life world is "an open project" (Vannini & Taggart, 2012, p. 238), endlessly in the making.

More importantly, however, this paper has revealed how, through a narration of the ways in which human–environment entanglements are encountered and unfold on a given day, everyday expressions of contestation, negotiation, and affordance come to the fore. For example, as described above, the gradual, day-to-day expansion of the island-based built environment in recent years, in which powerful lighting systems have been installed alongside island harbours, is a source of daily tension between island councils eager to modernise their islands and resorts that aim to create a "softer" atmosphere for their guests. However, this lighting has also allowed islanders to "extend" their daily social lives by gathering together outside their homes after nightfall. Moreover, the nature–culture entanglement of waste, as epitomised by the burning rubbish tip, is encountered by many tourists on a daily basis in a multi-sensory manner, through seeing or smelling the smoke or, if they are close enough, hearing the crackling of its flames. This has led to their relocation to a different part of the island, thus limiting on a daily basis the bathing and leisure opportunities of island-based populations, particularly women.

While some studies have shown how people's everyday practices are routinised and shift to accommodate small and big changes in their environments, this paper reveals the significance of day-to-day changes in the physical environment. This confounds much of the environmental change literature that pays attention to sudden and infrequent shocks and stresses, such as major flooding or storm surge events. This focus on catastrophes has also reinforced perceptions that some people in some parts of the world are defenceless in the face of environmental change (Doulton & Brown, 2009). Instead, the paper highlights how much change to the physical environment occurs daily. And, while these alterations may be regarded as "normal" or "mundane" and, indeed, as part of the background "noise" of life, they nonetheless are produced out of, and necessitate changes in, routines. That these may be minute and almost imperceptible, at least to outsiders, makes them no less significant. Furthermore, day-to-day changes can also accumulate over time to produce greater, more evident effects. These may emerge more slowly, but they nonetheless shape what people see and what they do, requiring daily attunements and adjustments.

In addition to these effects, there is the incorporation of changes in the physical environment into the spatial and temporal dimensions of people's practices, routines, and habits, becoming internalised and embodied in the process. Consideration of the everyday thus directs attention to human agency and the possibility of everyday creativeness, inventiveness, and hope in the face of environmental variability and change (Head, 2016). It also raises questions, however, of where the limits to these processes might lie, and at which point the build-up of incremental change might "tip" the physical environment, and the lives of people that are entangled with it, into a new state or way of living. Insights such as these can bring to the fore everyday phenomena that are often regarded as unimportant but have the potential to develop new understandings of how liveable, viable, and flourishing lives can be made in the context of ongoing environmental challenges, and thus point towards potential new solutions.

ACKNOWLEDGEMENTS

ENDNOTE

[1] Islands are not named in order to preserve the anonymity of respondents.

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