



Environmental Harms at the Border: The Case of Lampedusa

Francesca Soliman¹ 

Accepted: 4 February 2023
© The Author(s) 2023

Abstract

In this paper I examine authorities' management of migrant boats on the island of Lampedusa, Italy, as an example of environmental border harm. A danger to trawlers, sunken wrecks are also hazardous to the environment, with pollutants such as oil and fuel seeping into the sea. Migrant boats that reach the island, whether independently or towed by rescuers, are left to accumulate in the harbour and eventually break up, scattering debris in bad weather. When boats are uplifted onto land, they are amassed in large dumps, leaking pollutants into the soil. Periodically, the resulting environmental crises trigger emergency tendering processes for the disposal of the boats, which allow for the environmental protections normally required in public bidding to be suspended for the sake of expediency. The disposal of migrant boats thus relies on a pattern of manufactured environmental emergencies, consistent with the intrinsically crisis-based management of the border itself.

Introduction

A small island in the Strait of Sicily, Lampedusa, has in recent years become synonymous with the European Union's central Mediterranean border (Dines et al. 2014; Wright 2014; Kushner 2016; Orsini 2016). The formalisation of migrant reception has turned the island into a key entry point for irregular migrants, receiving over 400,000 arrivals over the last 20 years (Bassi 2018; p. 343). In this paper, I argue that environmental harm is a little-explored outcome of the processes of borderisation that have transformed Lampedusa into a site of confinement and control for migrants, and which have profoundly impacted the lives of its 6,000-strong resident population (Friese 2012; Cuttitta 2015).

Environmental border harms are largely unexplored in scholarly literature, the sole exception being the impact of physical infrastructure such as border barriers and their interference with wildlife (Trouwborst et al. 2016; Roche et al. 2017; Garbus 2018). In Lampedusa, however, border control does not rely on man-made physical barriers; in fact, the island is famous for the uncontaminated wilderness of its natural environment (Surico 2020). Despite its small size, Lampedusa holds considerable environmental significance. Most of the island is a Site of Community Importance (SCI) as defined in the European

✉ Francesca Soliman
F.Soliman@napier.ac.uk

¹ School of Applied Sciences, Edinburgh Napier University, 9 Sighthill Ct, Edinburgh EH11 4BN, UK

Commission Habitats Directive (92/43/EEC) and a Special Protection Area (SPA) under the European Union Directive on the Conservation of Wild Birds; both designations form part of the EU-wide Natura 2000 network of protected areas (European Environment Agency 2019). The island is an important pit stop for migratory birds, including globally rare species such as the Eleanora's falcon, and it is home to endemic insects such as the *Pamphagus Ortolaniae*, a wingless cricket found nowhere else in the world. The waters surrounding Lampedusa form part of a large marine protected area where sea-related activities are strictly regulated in order to safeguard the fragile marine ecosystem (Isole Pelagie 2018); furthermore, a nature reserve on the south coast protects one of the last known European nesting sites of the loggerhead sea turtle in Europe (Prazzi et al. 2010). Despite these legal recognitions of Lampedusa's environmental importance, the consistent mismanagement by Italian authorities of the vessels used by irregular migrants to cross the Mediterranean has caused long-term environmental harm to the sea surrounding the island, to the island's coastal area, and to its territory. These harms are the foreseeable and preventable result of state neglect, which actively precipitates the cyclical creation of crisis in order to trigger emergency tendering mechanisms which allow for short-term solutions to be implemented with diminished oversight.

Lampedusa's environmental emergencies go largely unnoticed outside of the island, obscured either by critical events such as deaths at sea, or by state authorities' routinised use of the language and spectacle of crisis to justify the growing securitisation of borders (Pugliese 2009; Campesi 2011; De Genova 2013; Kushner 2016; Baldwin-Edwards et al. 2018). Environmental border harms are thus inextricably linked to the working and management of borders.

Background

Over the past few decades, the facilitation of internal mobility in the European Union has corresponded with the ever-increasing securitisation of its external borders (Finotelli and Sciortino 2013; Jubany 2014). Those national boundaries corresponding with the edge of the EU have been hardened following the introduction of international instruments such as the Schengen Agreement and the Dublin Regulation, local control practices such as fingerprinting and ID recording, and new discourses equating surveillance with humanitarianism (Campesi 2014; Brekke and Brochmann 2015; Cusumano and Gombeer 2018; Franko 2021). At the Euro-Mediterranean border, this has corresponded with the increased *borderisation* of peripheral zones, particularly islands (Mountz 2011). I use the term *borderisation* as a translation of the Italian word *frontierizzazione*, coined by Cuttitta (2012, 2015) to describe the incremental production and performance of the EU border on the island of Lampedusa. According to Cuttitta, borderisation is not an accident of geography, but a deliberate act that is "*carried out through specific policies, practices and discourses*" (2014: p. 196). The term borderisation thus reflects a view of borders not as the natural edges of territories, but as phenomena that are specifically constructed and performed (2015).

The perilousness of sea-crossing and the improbability of escaping detection make islands inherently unattractive as irregular entry points, unless a border infrastructure is created to receive migrants and transport them to the mainland; borderisation itself thus determines islands' role within migration routes (Godenau 2009, 2012). Islands such as Lampedusa have become key border enforcement tools for nation states, which routinely

use them as places of both formal and informal confinement and turn them into preferred sites for the production and normalisation of migration crises (Mountz 2011; Godenau 2012; Loyd and Mountz 2014). The wider study from which this paper is drawn used a zemiological (i.e. social harm-based) framework to understand the social harms linked to the borderisation of the island of Lampedusa, and their underlying structural causes (Soliman 2021). While criminology privileges crime-centric perspectives, zemiology focuses on systemic causes of harm rather than illegalised and/or intentional acts. The study adopts an ethnographic methodology, understood as a way of making sense of the field and linking it to theory (Edwards, Mahoney and Vincent 2014); living in Lampedusa for two months (April and May 2018), I carried out participant observations of island life, engaging with residents from different social groups and with border authorities, and participating in public meetings organised by a community organisation called *Forum Lampedusa Solidale*. In addition, I carried out eight face-to-face interviews with residents, delving more deeply into their personal experience of living in a borderised space. The findings presented in this paper rely on both sets of data. The research was carried out in accordance with the Economic and Social Research Council's Framework for Research Ethics (ESRC 2015), and received formal ethical approval by Edinburgh Law School's Ethics Committee. The interview respondents quoted in this paper were anonymised by being randomly allocated the name of a Mediterranean wind.

An Offshore Minefield

According to local fishermen, the sea around Lampedusa was littered with the sunken wrecks of migrant boats:

Because when you see a speedboat carrying migrants you need to wonder where their boat is. Or their rubber dinghy. If the boat of those who are carried on the speedboat does not come to Lampedusa, it means that they either gave it back to the migrants so they can do another load, or they sank it. Who will know where it was sunk, nobody knows. [Sirocco]

Sirocco suggested that, following rescue operations at sea, the Coast Guard or other SAR providers such as Frontex or NGOs might either return boats to smugglers, or scuttle these boats so they would sink at sea. When Italian authorities encounter a boat carrying irregular migrants, whether following interception at sea, search and rescue, or an independent landing, they must seize the vessel under article 12 of the 'Testo Unico sull'Immigrazione' (TUI), the consolidated legislative decree regulating non-EU immigration in Italy (Legislative Decree number 286 dated 25 July 1998). Article 12 criminalises a range of activities aimed at facilitating the irregular entry of non-EU nationals and establishes that the means used to transport people irregularly must always be seized by law enforcement. This seizure is usually eventually followed by confiscation, after which the state may sell the vessels, entrust them to state bodies such as police or coast guard, or destroy them.

According to procedure, therefore, migrant vessels should be routinely towed by authorities and taken to port. While I found no evidence to support Sirocco's suggestion that rescuers would return boats to migrant smugglers, Ponente, a professional fisher, told me they had witnessed migrant boats being either left adrift or sunk into the open sea:

No no no no, they are left adrift, not scuttled. Actually, I also saw scuttling, I saw them, but I do not have evidence so it's pointless for me to tell you about it, but I did see them. I saw them set fire [to the boats]. [Ponente]

Ponente maintained that fishers would often encounter empty migrant boats left adrift at sea, often partially scuttled. The fact that the boats were empty suggested that a rescue operation had taken place. It is unlikely that Ponente had been referring to NGO Search and Rescue (SAR) vessels, as their operations would typically take place further away in the Strait of Sicily, while the fishing fleet kept within 40 miles of the Lampedusan coast (Cuttitta 2017). This suggests that the vessels encountered by fishers were likely to be either the local Coast Guard, Frontex assets, or other vessels carrying out an unplanned rescue after encountering migrants in distress. The failure to tow these boats back to land, according to Ponente, was likely a deliberate choice by authorities due to the bureaucracy and expense of disposing of boats in accordance with the law:

It's easier to sink them in the open sea. Also, because there are so many of them, if you took them here, you'd end up with thousands of boats. How would you dispose of them? How much would it cost? Just let the sea dispose of them. [Ponente]

Allowing boats to sink was not only a cheaper alternative, but also easy to conceal, as the sinking could be framed as the inevitable result of pre-existing leaks making it impossible to tow the boats back to land. This would undoubtedly have been true in some cases, as sea-crossers' vessels were often barely seaworthy, and shipwrecks common (International Organisation for Migration 2016). As Collyer points out, border control agents and sea-crossing migrants sometimes give conflicting accounts of incidents at sea, each accusing the other of scuttling the migrants' boat (2010). Past evidence suggests that migrants would damage their own vessel when meeting authorities in the Mediterranean in order to force a rescue and prevent being towed away from the state's territory (Sciortino 1999); however, it should be noted that such evidence precedes the formal migrant interception procedures that operate today, so its relevance is unclear. Furthermore, Heller & Pezzani document how migrant boats can also be accidentally sunk by larger commercial vessels, when these find themselves forced to attempt rescue operations for which they lack the appropriate equipment (2016). Elsewhere in the world, the scuttling at sea of migrant boats by authorities has been well documented, for example the sinking by United States agents of boats used by Cuban and Haitian sea-crossers (Pugh 2004). In short, despite Ponente's suggestion, it remains impossible to establish with certainty who is responsible for sinking migrant boats in the Mediterranean. My attempts to discuss the fate of empty boats at sea with Coast Guard and Frontex agents were met with refusals; indeed, I was informed at the local Coast Guard station that agents were forbidden from discussing issues related to migrants or their boats without explicit ministerial approval.

Regardless of the causes behind their sinking, the wrecks of migrant boats had serious consequences for commercial fishers around Lampedusa. It was frequent, for example, for parts of the wrecks to get caught in their trawls, as shown in Fig. 1 below. This photo was given to me by Ponente, who had taken it about 35 miles south-east of Lampedusa, and it shows the propeller and part of the hull of a sunken migrant boat snagging the nets of Ponente's trawler.

Ponente explained that trawlers would lower their nets for three hours at a time during their fishing trips; if part of a wreckage got caught in the net, the net would get torn and provide fish with an escape route. When fishers would raise the nets to find a wreck caught in them, as is the case in the photo above, they would find their catch was lost, and more



Fig. 1 A boat wreck's propeller caught in a fishing net. Picture provided by Ponente and reproduced with permission

time and money would need to be spent repairing their equipment. Ponente estimated that someone in the fleet would have their trawls torn by wrecks in this manner at least four or five times every night, making the cumulative financial loss to Lampedusa's fishing economy considerable. In addition, larger sunken wrecks could prove too heavy for the fishing boats to move, potentially causing them to capsize when caught in the trawls. Half-sunken wrecks were also hazardous, hiding beneath the surface of the sea, all but invisible in the night. Ponente told me they had encountered them often and had always managed to avoid them, but others in the fleet had not always been so fortunate:

What happened is that it was a very close shave. He hit the wreck and seriously damaged his boat, he was taking on water, but he was close to the harbour, so he made it; he survived. [Ponente]

Migrant boats had been accumulating for over 30 years, since sea-crossers had first started to venture from North Africa in the 1990s, and the sea around Lampedusa was now a minefield for fishing boats. Although Lampedusa's fishers shared the GPS position of the wrecks they encountered, accidents continued to happen. This, Ponente told me, was because the wrecks kept moving. Lampedusans were not the only ones to fish in these waters; Tunisian fishing boats, for example, were much larger and more powerful than the local ones and could drag a large wreck around the seafloor with their nets. These encounters between Lampedusa's fishing fleet and the ever-increasing number of wrecks at the bottom of the sea had not only financial and safety implications, but also environmental ones, as the frequent snagging of trawls would cause broken fishing gear to become loose in the sea. This type of debris, known as ghost nets, can be lethal to marine wildlife, including sea turtles (Sheavly and Register 2007; Blasi et al. 2016). In addition, boats sinking during a sea-crossing are likely to still have fuel in their tanks, and to carry other polluting substances such as oil, paint, battery acid, and some belongings left behind by passengers, including other polluting substances such as plastics



Fig. 2 Migrant boats amassed at the Molo Favalaro

(SkyTG24, 2011). The environmental hazards posed by sunken migrant wrecks are largely hidden from view, but they become more clearly visible in Lampedusa's small harbour.

Coastal Pollution: The Case of the Molo Favalaro

When boats did arrive to Lampedusa, whether by being towed following a rescue operation or by reaching the island independently, they would be moored by authorities in Lampedusa's small harbour, usually in one of the three piers reserved to military and law enforcement agencies. Figure 2 below shows one of these piers, the Molo Favalaro, where according to residents the vessels would be abandoned by authorities and left to sink:

At the Molo Favalaro they just leave them there, then coastal storms break them up, even when they are moored. [Libeccio]

The breaking up of small wooden boats such as those in Fig. 2 would have likely taken no more than a few months. The main reason would have been lack of maintenance, as wooden boats need to be treated regularly to remain waterproof. Another major factor, however, would have been adverse meteorological conditions, as winter storms regularly damaged the boats moored in the harbour (Agrigentonotizie 2019b). In addition, Lampedusa's port was vulnerable to a particular phenomenon locally known as 'marrobbio', a form of meteotsunami common in the Strait of Sicily (Candela et al. 1999). Marrobbio can raise sea level by up to 150 cm, suddenly and without warning, thus causing moored boats to capsize and sink (Espressione 2017). The eventual breaking and sinking of the boats abandoned in the harbour was therefore inevitable, and entirely foreseeable. However, no measures were taken to minimise the consequent marine pollution. Just like boats sinking at high sea, fuel, oil, or other pollutants were not removed from the boats in the port; as Ponente stated:

If there are any twenty, thirty litre barrels, you make them disappear. What is in the boat's tank, that will all come to the surface. Now one 100-horsepower engine has at least fifteen litres of oil inside, you don't take that out, it stays inside, then the engine breaks and it all goes into the sea. And the battery will go into the sea. [Ponente]

The expression “*make them disappear*” was a euphemism for theft, as opportunistic port users would take advantage of any full barrels left unattended. However, no attempts were made by authorities to clean the boat itself, so any remaining contents eventually leaked into the otherwise crystal-clear seawater. This was a regular occurrence, although larger events occasionally made the news, for instance the capsizing of a large boat moored at Molo Favalaro in November 2019, which spilled a considerable amount of fuel into the sea (Agrigentonotizie 2019a). The boat had been moored in port for five years, yet its tank had never been emptied.

The environmental harm caused by sunken migrant boats is difficult to quantify, but the environmental negligence shown by authorities is evident. Available literature on the environmental risks of ship scuttling mostly focuses on military vessels (Rogowska and Namieśnik 2013; Devault et al. 2017); however, these raise specific concerns related to hazardous materials such as ammunition or other explosives, which are not relevant to migrant boats. Oil and fuel spills, on the other hand, are known to be dangerous to the ecosystem, although literature on oil spills focuses mostly on industrial accidents or other major polluting events (Stephenson 1993; Michel et al. 2005). This makes it difficult to estimate the impact of the smaller boats used by sea-crossers, although it should be noted that boat sizes vary according to the migration route (Monzini 2007). In this case, the environment was likely affected not so much by the scale of the individual incidents, but by their cumulative effect, given that thousands of boats have travelled to Lampedusa over the years, and continue to do so. The decision to deliberately sink a boat normally involves a number of environmental considerations because, as detailed by Devault et al. (2017), sea vessels contain polluting substances which can contaminate the sea floor and cause long-term damage to surrounding flora and fauna. The deliberate sinking of a boat should thus ideally be preceded by attempts to clean it from any potentially toxic chemical it contains (Cooke and Hoyt 1970). While many of these pollutants might not be immediately released into the sea, they would inevitably leak out over time as a result of corrosion (Michel et al. 2005).

The environmental costs of these wrecks were not lost on the local community, which according to Ponente had offered in the past to systematically clean and sink the vessels in a controlled manner:

They make me mad, because we suggested it 20 years ago to the Ministry, this idea of sinking the boats. We would strip the paint, we would clean them, and we would create a barrier outside the port for two–three miles to make sure the trawls don’t get snagged, and we would create a reserve. They called us idiots, lunatics. We were lunatics, but now they are doing it. When they do it, then it’s all good. Without stripping the paint, without cleaning them. [Ponente]

While the arrival of boats was considered inevitable, the damage caused by wrecks was not. In many cases, the sinking of a migrant boat in the open sea would be the result of a breakdown or accident, so little action could be taken to remove pollutants. However, if some boats were being scuttled or abandoned by rescuers, as Ponente and others maintained, then the harmful effects of these wrecks on the marine environment were both foreseeable and preventable. When it comes to boats left to sink in the town’s harbour, these environmental harms were clearly the result of deliberate acts and omissions by authorities, whose routinised environmental negligence was not limited to damaging Lampedusa’s marine environment.

Lampedusa's Boat Cemeteries

The poor management of migrant boats was a long-standing phenomenon in Lampedusa. Although less frequently over the last decade, in the past, seized migrant boats would routinely be lifted out of the water and stored on dry land, creating large dumps known as boat cemeteries. Depicted in Fig. 3 below are the two cemeteries still present on the island at the time of my stay: one was at the edge of the town, between the harbour and the football field (left); the other by the former LORAN military base (right), on the opposite side of the island, away from residential areas. An additional dumping ground for migrant boats used to be located in the area known as Taccio Vecchio, in the middle of Lampedusa, which has since become the island's waste management facility. The boats depicted in Fig. 3 had been in Lampedusa for years, as evidenced not only by their state of disrepair, but also by their large size, which suggested they had made the crossing from Libya rather than Tunisia, a route that had become unfeasible by the mid-2010s. Periodically, the dumped boats would be crushed, loaded on cargo ships, and taken to landfill sites on the mainland.

The island's boat cemeteries had much reduced in size by the time of my visit, but had collectively housed large numbers of boats over the years, as noted by Levant:

Because they piled them up, hundreds and hundreds of them, [...] and they caused seepage into the soil, etc., they would end up being set on fire, they would end up in such a state... [Levant]

Levant here mentioned the fires that had periodically hit the boat cemeteries in the past, for example the one in Taccio Vecchio in 2010 (Giornale di Sicilia 2010), or by the port in 2014¹ (Fulloni 2014). Residents seemed to have little doubt that these fires had been started by those tasked with the boats' removal, perhaps to make more space or to cut down on costs. While the responsibility for this arson cannot be ascertained, the wilful mishandling of potentially polluting waste is undeniable. The seepage mentioned by Levant referred to the liquids inside the boats, such as fuel and engine oil, which had not been removed from the boats before they were dumped. Soil pollution by oil-based substances is a well-documented hazard, and so are the harmful effects of their fumes on humans (Rauckyte et al. 2006; Wang et al. 2017). Furthermore, the toxic smoke produced by oil-based substances when burnt would further exacerbate air pollution during fires. Still, migrant boats were simply lifted out of the water and dumped on land without being emptied of any waste products:

Besides, they just dumped them with bulldozers, so they broke down, they fell apart, with all the waste still inside. They would not remove waste, organic waste, clothes, you have no idea of what's left on a migrant boat after disembarkation. And they became a haven for mice, and maybe some wily guy would go and dump their own waste there too, right? [Levant]

While so far unquantified and perhaps unquantifiable, the environmental harm linked to migrant boats on Lampedusa and at sea cannot be ignored. Some of this harm might have been inevitable, as in the case of accidents at sea, but in other cases, it was evident that damage was knowingly being allowed to occur. This harm was undoubtedly preventable. Lampedusans' proposal to clean up and then sink migrant boats in a controlled manner,

¹ A deliberately started fire would hit the boat cemetery by the port again in 2020 (Scifo 2020).



Fig. 3 Migrant boats dumped near the football field (left) and the former LORAN base (right)

for instance, would have reduced both the economic and the ecological damage caused by wrecks in Lampedusa's waters. The reasons behind authorities' disregard for such a solution seem obscure, but become clearer in the following analysis of the processes that regulated the disposal of migrant boats.

The Management of Migrant Wrecks

As I mention earlier, authorities must seize migrant vessels under article 12 of TUI, a seizure that is usually eventually followed by confiscation, and then the sale, destruction, or re-purposing of the vessels. However, legislation introduced in 2002 has modified article 12 of the TUI to allow for seized migrant boats to be destroyed without a final confiscation order (L.D. number 51 dated 4 April 2002; Law number 106 dated 7 June 2002). These provisions also give the customs agency the power to commission specific firms to manage the urgent disposal of boats, even if this means circumventing normal procedures regulating public procurement (Lampedusa 2014b). The owners of seized vessels could still reclaim them if they are cleared of the offence, although this is a rare occurrence; since sea-crossing is usually a one-way journey, boats are often either custom-built or already approaching the end of their life (Carling 2007). In addition, even if boat owners were able to reclaim their vessel after being cleared, it is doubtful this would have remained seaworthy after the lengthy legal proceedings. An example is the case of Zenzri and Bayoudh, two Tunisian fishermen accused of facilitating irregular migration after rescuing 44 migrants at sea and taking them to Lampedusa (Jacquemet 2020); while their initial conviction was quashed on appeal, their boat was by then beyond repair, having been left to rot for years on Lampedusa.

While legal provisions appeared straightforward, in practice the treatment and disposal of migrant boats on Lampedusa was a fraught process. There seemed to be no system in place to deal with the boats in a methodical manner; instead, wrecks would periodically accumulate in port and on land until a crisis point was reached, which would make emergency measures necessary. In the words of a resident:

They piled them up, [...] and then they would put the disposal [of boats] out to tender, using the excuse of emergency to do it illegally. [Levant]

Levant's comment about illegality refers to the ability of public bodies to circumvent the normal restrictions regulating competitive tenders for reasons of urgency. For instance, the

disposal in 2019 of the fishing boat ‘Maka’ had required an emergency procedure triggered by the boat’s partial sinking following bad weather. According to the customs agency, the boat had been recovered in 2015 and kept in Lampedusa’s port ever since (Agenzia Dogane Monopoli, 2019). The agency declared that, should the boat sink completely, the release of the boat’s fuel and oil into the water would cause “very serious” environmental harms, affecting the economy of the port and endangering the security of other vessels (ibid.). For these reasons, usual tender procedures had to be bypassed:

When, for reasons of extreme urgency which are caused by events unforeseeable to the awarding administration, the terms for open proceedings or for restricted proceedings or for competitive proceedings with negotiation cannot be respected, the administrations can award public contracts through a negotiated procedure without the previous publication of a call for tenders. (Agenzia Dogane Monopoli 2019)

The bypassing of tender procedures allowed the awarding authority to approach specific companies directly to ask for quotes, and to waive the checks usually needed to ensure the quotes were realistic. The case of the boat Maka was emblematic of the routine mismanagement of migrant boats. While the conditions of the wreck posed an undeniable danger to the port’s environment and safety, these conditions had been created by the authorities’ neglect of the boat itself, such as the failure to empty its tank. While bad weather had precipitated the state of emergency, it remains debatable whether this truly had been “*caused by events unforeseeable to the awarding administration*”. Nevertheless, emergency processes dominated all stages of the disposal of migrant boats. According to Italian journalists Sanfilippo & Scialoja (2010), for example, the former boat cemetery at Taccio Vecchio had been created in 2006 by the Civil Protection Department through the use of emergency powers. These powers had been used to circumvent environmental restrictions on the use of Taccio Vecchio, which was located within both the Site of Community Importance and the Special Protection Area. The move was challenged by national environmentalist organisation Legambiente, which obtained the seizure of the site pending further investigations. After two years of legal wrangling, the matter was settled by arson, and the boats went up in smoke on Boxing Day 2008. The company commissioned with destroying the boats, however, remained entitled to their fee, which then mayor De Rubeis made conditional to the payment of a large bribe, one of several offences for which he was later imprisoned (Ziniti 2018). According to Sanfilippo & Scialoja (2010), the company had been awarded every emergency contract for the destruction of migrant boats since the year 2000, with the company owner’s close friendship with a powerful Sicilian politician raising questions over the transparency of the emergency procurement process. After each contract ended, disposal would stop, and boats would begin accumulating again until the next emergency. The repeated recourse to emergency powers to trigger the disposal of migrant boats not only hindered transparency in the administration of public funds, potentially fostering mismanagement and illegal activity, but consistently restored the state of crisis it was meant to resolve.

The status quo also prevented the implementation of alternative solutions. Libeccio, for example, told me of several attempts made by Lampedusans to reuse some of the migrant boats; in one case, Libeccio and others had wanted to turn a boat which had arrived in perfect conditions into a floating classroom on which to teach schoolchildren about migration:

Some boats arrive new, but really new, both the wood and the engine, beautiful boats, large, they would have been perfect for our aims. However, Italian bureaucracy, we always end up saying the same things, and then all these boats, they lifted them, put

them on dry land, they ended up like this, and then they crushed everything. [Libecio]

In this case, the request to utilize a boat for cultural purposes would have required an exceptional dispensation, as the TUI made no provisions for the state to entrust seized boats to private citizens or associations (Lampedusa 2014a). However, requests to consider alternative ways to destroy the boats also met difficulties. Unlike quick emergency demolitions, such proposals would need to include detailed environmental, safety, and financial assessments to be even considered for formal approval. Instances of local proposals included an offer by the administration of Lampedusa to take charge of the removal from the port of two old boats moored in the harbour, including the fishing boat *Maka*, while a private company had offered to dispose of abandoned boats for free in return for the scrap metal (Puato 2019). Neither of these proposals raised the authorities' interest, and emergency demolitions remained the norm. This was a source of consternation for Levant, who had hoped that the raw materials from the boats could become a resource for the community:

I thought that a cooperative made up of young people could have done all sorts of things with that wood: from street furniture, to benches, to objects, even gadgets to sell to tourists [...]. [Levant]

The management of migrant boats thus remained completely outside the control of the local population, who had to live with the long-term impact of their presence on the island. Even if the bureaucracy had allowed it, however, locals had limited resources to take any initiatives independently, either for lack of funds or jurisdiction, leaving the community completely dependent on external intervention to remove them.

Borderisation and Ecological Injustice

The management and disposal of the boats used by sea-crossers had an undeniable negative impact on the natural environment of Lampedusa. As the evidence presented above shows, much of this negative impact was both foreseeable and preventable, and there was no sign that measures were being implemented to at least minimise this damage in the future. While different scholars embrace different definitions of environmental harm, topics such as pollution, illegal disposal of waste, and general interference with wildlife and habitats have all featured heavily within green criminology (Ruggiero and South, 2010). These definitions are succinctly summarised by White (2013), who describes environmental harm as having two components: firstly, the presence of injury to the environment, including humans or other animals; secondly, the facilitation of such injury by state, corporate, or other actors who have the power to influence its legitimacy. The case of Lampedusa clearly meets both criteria.

As I mentioned earlier in this paper, environmental border harms are largely unexplored in scholarly literature, the only exception being the effects of physical infrastructure like border barriers (Trouwborst et al. 2016; Roche et al. 2017). As Trouwborst et al. note, border barriers are designed to disrupt mobility, so their interference with wildlife is irreparable without compromising their intended function (2016). Despite their intrinsic hazardousness to the environment, border barriers fall outside the reach of both national and international environmental protection mechanisms thanks to exception clauses linked to reasons of national security, public interest, or states of emergency (Trouwborst et al. 2016; Garbus 2018). Similarly, border control in Lampedusa, while not relying on man-made

physical barriers, still benefited from a routinised state of emergency to circumvent environmental regulations; in fact, as shown in the findings, the disposal of migrant boats relied on regularly resorting to emergency powers, which allowed for customary environmental safeguards to be circumvented. The expediency of emergency powers was contingent on the presence of a crisis to trigger their authorization. Ironically, the crisis was often environmental in nature, which created an incentive for authorities to wait for bad situations to become worse in order to deal more quickly with the aftermath. Rather than building environmental protections within a standardised system to regulate the disposal of migrant boats, current practice was instead based on the routine accumulation of environmental damage. The routinisation of environmental harm was based not on a lack of environmental regulations, but on the ability of state institutions to make exceptions to them.

Academic discourse on the structural causes of environmental harms often focuses on the zemiogenic nature of economic systems; for instance, White highlights consumption-related environmental harms as inextricably linked to consumerism (2002). The greater capitalism's influence on social policy, White argues, the higher the likelihood that business interests will take precedence over environmental concerns (2013). Capitalism's global role in producing environmental harm is well documented and hardly disputable at this point in time (Gould et al. 2016). Within criminology, recent debate has focused on whether a 'green' form of capitalism is possible (Shearing 2015), or whether the two concepts are fundamentally incompatible (South 2015). In Lampedusa, however, environmental damage linked to border activities seemed uncoupled from the island's economic system. This is not to say that economy-related environmental harm was absent, as tourism development had undoubtedly increased pollution, unplanned urbanisation, and habitat destruction (McElroy 2003; Orsini 2015). Indeed, as Orsini notes, the borderisation of the island corresponded with the arrival of mass tourism, changing its economic order towards a neo-liberal model favouring competition and ever-expanding growth, with massive negative repercussions on the environment. However, the generative mechanisms leading to the specific environmental border harms identified in this research were rooted not in socio-economic structures, but in the legal and political expediency of exempting border practice from scrutiny by exploiting loosely defined emergency exceptions, which allowed for environmental protections to be bypassed. Environmental damage was thus intrinsic to borderisation: not simply an accidental by-product, but a constituent part of the persistent state of crisis on which the functioning of the border relied.

This exemption effectively denied state accountability for border-related environmental damage by removing it altogether from the reach of the law. From a criminological perspective, scholars such as Brisman & South argue that criminalisation may be an effective tool to prevent some environmental harms (2018); if this was the case, however, it seems likely that legislators would continue to subordinate environmental concerns to wider national interests, making criminal law a blunt instrument to regulate state action. Similarly, some scholars have advocated for environmental crimes and harms to be prohibited under international law by establishing a strict liability crime of ecocide, which would hold states into account (Higgins et al. 2013). Under this framework, the case of Lampedusa may fall under what Higgins et al. define as "secondary environmental harms", which include "major and minor practices whereby states violate their own regulations (either by commission or omission) and in so doing contribute to environmental harms" (2013: p. 252). Such legal instruments, however, would also be limited, as by meeting the emergency exceptions written within environmental law the state is in fact not violating regulations, but rather following them to the letter. A zemiological rather than crime-based framework is thus an essential instrument to understand the nature of these environmental harms,

which must be viewed not in isolation as the results of specific acts and omissions, but as part of the structural violence intrinsic to borders. These environmental harms remain in essence a manifestation of border harms, and cannot be uncoupled from their specific political, social, and historical context (Soliman 2021).

Conclusion

Over the past few decades, the borderisation of Lampedusa has turned the small island into a key point of arrival for migrants crossing the Mediterranean Sea to reach Europe. As Lampedusa's role within the securitisation of the EU's external borders has become ever more prominent, the number of boats trying to reach it has steadily increased, and so has the number of boats that have sunk in its waters. With the border operating in a constant state of emergency, authorities have consistently failed to implement any significant measures to minimise the environmental damage caused by boats abandoned at sea, moored in harbour, or dumped on land. Meanwhile, fishing gear debris continues to ensnare and suffocate sea animals, hazardous materials continue to seep into the sea and the land, and Lampedusa's community is denied any chance of ecological justice in their own territory. Environmental border harms are a consequence of the crisis-based management designed into the EU's external borders, which allows state authorities maximum discretion and impunity while leaving disempowered border communities to deal with the resulting long-term environmental destruction.

Funding This research was funded by the Economic and Social Research Council (studentship number: ES/J500136/1).

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Agenzia Dogane Monopoli (2019) *Determinazione prot. n. 4345/R.I. del 03/12/2019*. doi: <https://doi.org/10.1017/CBO9781107415324.004>.
- Agrigentonotizie (2019a) *Si capovolge barca di migranti, Porto Vecchio invaso dal gasolio*. Available at: <http://www.agrigentonotizie.it/cronaca/lampedusa-mareggiata-affonda-barca-migranti-gasolio-inquinamento.html> (Accessed: 5 February 2020).
- Agrigentonotizie (2019b) *Via alla rimozione delle 'carrette del mare' dal porto di Lampedusa*. Available at: <http://www.agrigentonotizie.it/cronaca/barche-porto-lampedusa-rimosse-carrette-del-mare.html> (Accessed: 5 February 2020).
- Baldwin-Edwards, M., Blitz, B. K. and Crawley, H. (2018) 'The politics of evidence-based policy in Europe's "migration crisis"', *Journal of Ethnic and Migration Studies*, 45(12), pp. 1–17. doi: <https://doi.org/10.1080/1369183X.2018.1468307>.
- Bassi, M. (2018) 'Lampedusa: dynamics of bordering and "encampment"', in Caponio, T., Scholten, P. Zapata-Barrero, R. (ed.) *The Routledge handbook of the governance of migration and diversity in cities*. Routledge.

- Blasi, M. F., Roscioni, F. and Mattei, D. (2016) 'Interaction of loggerhead turtles (*Caretta caretta*) with traditional fish aggregating devices (FADs) in the mediterranean sea', *Herpetological Conservation and Biology*, 11(3), pp. 386–401.
- Brekke, J. P. and Brochmann, G. (2015) 'Stuck in transit: Secondary migration of asylum seekers in Europe, national differences, and the Dublin Regulation', *Journal of Refugee Studies*, 28(2), pp. 145–162. doi: <https://doi.org/10.1093/jrs/feu028>.
- Brisman, A. and South, N. (2018) 'Green Criminology, Zemiology, and Comparative and Inter-Relational Justice in the Anthropocene Era', in Boukli, A. and Kotzé, J. (eds) *Zemiology*. Cham: Palgrave Macmillan. doi: https://doi.org/10.1007/978-3-319-76312-5_11.
- Campesi, G. (2014) 'Frontex, the Euro-Mediterranean border and the paradoxes of humanitarian rhetoric', *South East European Journal of Political Science*, 2(3), pp. 126–134. doi: <https://doi.org/10.2139/ssrn.2519410>.
- Campesi, G. (2011) 'The Arab Spring and the Crisis of the European Border Regime: Manufacturing Emergency in the Lampedusa Crisis', *EUI Working Papers*, 59. Available at: <http://cadmus.eui.eu/handle/1814/13218> (Accessed: 17 October 2013).
- Candela, J. et al. (1999) 'The "Mad Sea" phenomenon in the Strait of Sicily', *Journal of Physical Oceanography*, 29(9), pp. 2210–2231. doi: [https://doi.org/10.1175/1520-0485\(1999\)029<2210:TMSPT>2.0.CO;2](https://doi.org/10.1175/1520-0485(1999)029<2210:TMSPT>2.0.CO;2).
- Carling, J. (2007) 'Migration control and migrant fatalities at the Spanish-African borders', *International Migration Review*, 41(2), pp. 316–343. doi: <https://doi.org/10.1111/j.1747-7379.2007.00070.x>.
- Collyer, M. (2010) 'Stranded migrants and the fragmented journey', *Journal of Refugee Studies*, 23(3), pp. 273–293. doi: <https://doi.org/10.1093/jrs/feq026>.
- Cooke, T. and Hoyt, J. (1970) 'Ocean Pollution by Sunken Ships', in *NUC Symposium on Environmental Preservation, 20–21 May, 1970*. San Diego, California: Naval Undersea Research and Development Center.
- Cusumano, E. and Gombeer, K. (2018) 'In deep waters: The legal, humanitarian and political implications of closing Italian ports to migrant rescuers', *Mediterranean Politics*, pp. 1–9. doi: <https://doi.org/10.1080/13629395.2018.1532145>.
- Cuttitta, P. (2015) 'Lampedusa Tra Produzione E Rappresentazione Del Confine', *REMHU : Revista Interdisciplinar da Mobilidade Humana*, 23(44), pp. 31–45. doi: <https://doi.org/10.1590/1980-85852503880004403>.
- Cuttitta, P. (2017) 'Repolicitization Through Search and Rescue ? Humanitarian NGOs and Migration Management in the Central Mediterranean', *Geopolitics*. doi: <https://doi.org/10.1080/14650045.2017.1344834>.
- Cuttitta, P. (2012) *Lo spettacolo del confine. Lampedusa tra produzione e messa in scena della frontiera*. Collana Et. Milano: Mimesis.
- Cuttitta, P. (2014) "'Borderizing" the island setting and narratives of the lampedusa "border play"', *ACME: An International E-Journal for Critical Geographies*, 13(2), pp. 196–219.
- De Genova, N. (2013) 'Spectacles of migrant "illegality": the scene of exclusion, the obscene of inclusion', *Ethnic and Racial Studies*, 36(7), pp. 1180–1198. doi: <https://doi.org/10.1080/01419870.2013.783710>.
- Devault, D. A., Beilvert, B. and Winterton, P. (2017) 'Ship breaking or scuttling? A review of environmental, economic and forensic issues for decision support', *Environmental Science and Pollution Research*, 24, pp. 25741–25774. doi: <https://doi.org/10.1007/s11356-016-6925-5>.
- Dines, N., Montagna, N. and Ruggiero, V. (2014) 'Thinking Lampedusa: border construction, the spectacle of bare life and the productivity of migrants', *Ethnic and Racial Studies*, 38(3), pp. 430–445. doi: <https://doi.org/10.1080/01419870.2014.936892>.
- Edwards, P. K., Mahoney, J. O. and Vincent, S. (2014) 'Critical Realism and Ethnography', in Edwards, P. K., Mahoney, J. O., and Vincent, S. (eds) *Studying Organizations Using Critical Realism: A Practical Guide*. Oxford: Oxford University Press. doi: <https://doi.org/10.1093/acprof>.
- Libera Espressione (2017) *Lampedusa 'Marrobbio' Affondano Due Pescherecci* [video online]. Available at: <https://www.youtube.com/watch?v=WqXr2epN77k> (Accessed: 5 March 2020).
- ESRC (2015) *ESRC Framework for research ethics*, *ESRC website*. Available at: <https://esrc.ukri.org/files/funding/guidance-for-applicants/esrc-framework-for-research-ethics-2015/> (Accessed: 21 February 2019).
- European Environment Agency (2019) *The Natura 2000 protected areas network*. Available at: <https://www.eea.europa.eu/themes/biodiversity/natura-2000/the-natura-2000-protected-areas-network#tab-inter-active-charts> (Accessed: 10 March 2020).
- Finotelli, C. and Sciortino, G. (2013) 'Through the Gates of the Fortress: European Visa Policies and the Limits of Immigration Control.', *Perspectives on European Politics & Society*, 14(1), pp. 80–101.

- Franko, K. (2021) 'The two-sided spectacle at the border : Frontex , NGOs and the theatres of sovereignty', *Theoretical Criminology*. doi: <https://doi.org/10.1177/13624806211007858>.
- Friese, H. (2012) 'Lampedusa and the Nascent Migration Industry', *Shima: The International Journal of Research into Island Cultures*, 6(2), pp. 66–84.
- Fulloni, A. (2014) *Lampedusa, in fiamme il «cimitero dei barconi»*, *Corriere.it*. Available at: https://www.corriere.it/cronache/14_gennaio_28/lampedusa-fiamme-cimitero-barconi-intervento-vigili-del-fuoco-ipotesi-dolo-migranti-8ca3fd26-880c-11e3-bbc9-00f424b3d399.shtml (Accessed: 9 March 2020).
- Garbus, M. (2018) 'Environmental impact of border security infrastructure: How Department of Homeland Security's waiver of environmental regulations threatens environmental interests along the U. S.-Mexico border', *Tulane Environmental Law Journal*, 31(2), pp. 327–344. Available at: <http://www.worldwatch.org/system/files/EP176C.pdf.%0Ahttp://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edshol&AN=edshol.hein.journals.tulev31.18&site=eds-live&custid=s2919029>.
- Giornale di Sicilia (2010) *Lampedusa, incendio nel cimitero dei barconi: è doloso*. Available at: <https://gds.it/articoli/cronaca/2010/09/10/lampedusa-incendio-nel-cimitero-dei-barconi-e-doloso-126392-8991dea5-661a-4a64-a1b9-6481fcb2ffae/> (Accessed: 9 March 2020).
- Godenau, D. (2012) 'An Institutional Approach to Bordering in Islands: The Canary Islands on the African- European Migration Routes', *Island Studies Journal*, 7(1), pp. 3–18.
- Godenau, D. (2009) 'Las migraciones internacionales. Un enfoque institucional', in Galván Tudela, J. A. (ed.) *Migraciones e integración cultural*. Las Palmas de Gran Canaria: Academia Canaria de la Historia, pp. 65–94.
- Gould, K. A., Pellow, D. N. and Schnaiberg, A. (2016) *Treadmill of production: Injustice and unsustainability in the global economy*. Oxon: Routledge.
- Heller, C. and Pezzani, L. (2016) *Death by rescue - The lethal effects of the EU's policies of non-assistance*. Available at: <https://deathbyrescue.org/> (Accessed: 30 March 2017).
- Higgins, P., Short, D. and South, N. (2013) 'Protecting the planet: A proposal for a law of ecocide', *Crime, Law and Social Change*, 59(3), pp. 251–266. doi: <https://doi.org/10.1007/s10611-013-9413-6>.
- International Organisation for Migration (2016) *Fatal journeys Volume 3 part 2 - Improving Data on Missing Migrants, Fatal journeys*. doi: <https://doi.org/10.18356/c7231504-en>
- A.M.P. Isole Pelagie (2018) *Area marina protetta Isole Pelagie*. Available at: <http://www.ampisolepelagie.it/> (Accessed: 5 March 2020).
- Jacquemet, M. (2020) 'Transidioma afloat: Communication, power, and migration in the Mediterranean Sea', *History and Anthropology*, 31(1), pp. 123–146. doi: <https://doi.org/10.1080/02757206.2020.1715968>.
- Jubany, O. (2014) 'Fortress Europe: dispatches from a gated continent', *Ethnic and Racial Studies*, 37(5), pp. 899–901.
- Kushner, T. (2016) 'Lampedusa and the migrant crisis: ethics, representation and history', *Mobile Culture Studies*, 2, pp. 59–92.
- Progetto Lampedusa (2014a) *Il Destino Delle Imbarcazioni Degli Immigrati Tra Normativa Vigente E Proposte Di Modifica, Consiglio Nazionale Forense*. Available at: <https://www.consiglionazionaleforense.it/documents/176702/178953/05.-Il-destino-delle-imbarcazioni-degli-immigrati.pdf/4c7350d5-0a79-465c-adad-b1a59549cd1a> (Accessed: 10 March 2020).
- Progetto Lampedusa (2014b) *Proposta Di Emendamento Della Disposizione Di Cui All'art. 12 T.U.I. In Merito Al Reimpiego Delle Imbarcazioni Degli Immigrati, Consiglio Nazionale Forense*. Available at: <https://www.consiglionazionaleforense.it/documents/176702/178953/16.-Il-parere-su-barconi-e-proposta-di-emendamento.pdf/5e16a5e0-76a0-4ea0-b246-702ca4aa3164> (Accessed: 9 March 2020).
- Loyd, J. M. and Mountz, A. (2014) 'Managing migration, scaling sovereignty on islands', *Island Studies Journal*, 9(1), pp. 23–42.
- McElroy, J. L. (2003) 'Tourism Development in Small Islands Across the World', *Geografiska Annaler*, 85(B), pp. 231–242.
- Michel, J. et al. (2005) 'An Issue Paper Prepared for the 2005 International Oil Spill Conference: Potentially Polluting Wrecks in Marine Waters', *International Oil Spill Conference*, 1, pp. 1–40.
- Monzini, P. (2007) 'Sea-border crossings: The organization of irregular migration to Italy', *Mediterranean Politics*, 12(2), pp. 163–184. doi: <https://doi.org/10.1080/13629390701388679>.
- Mountz, A. (2011) 'The enforcement archipelago: Detention, haunting, and asylum on islands', *Political Geography*, 30(3), pp. 118–128. doi: <https://doi.org/10.1016/j.polgeo.2011.01.005>.
- Orsini, G. (2015) 'Lampedusa: From a fishing island in the middle of the Mediterranean to a tourist destination in the middle of Europe's external border', *Italian Studies*, 70(4), pp. 521–536. doi: <https://doi.org/10.1080/00751634.2015.1120945>.

- Orsini, G. (2016) 'Securitization as a Source of Insecurity: A Ground-Level Look at the Functioning of Europe's External Border in Lampedusa', *Studies in Ethnicity and Nationalism*, 16(1), pp. 135–147. doi: <https://doi.org/10.1111/sena.12170>.
- Prazzi, E. et al. (2010) 'Protezione di Caretta caretta (Reptilia Chelonia) nella riserva naturale di Lampedusa.', *Il Naturalista Siciliano*, 34(3–4), pp. 265–294.
- Puato, A. (2019) *A Lampedusa 230 barche fantasma dei migranti. I pescatori: «Togliete i relitti, siamo bloccati»*, *Corriere della Sera*. Available at: https://www.corriere.it/economia/aziende/19_luglio_22/lampedusa-230-barche-fantasma-migranti-pescatori-togliete-relitti-siamo-bloccati-84fbfe50-ac5c-11e9-8470-d02c1b58748e.shtml (Accessed: 5 February 2020).
- Pugh, M. (2004) 'Drowning not waving: Boat people and humanitarianism at sea', *Journal of Refugee Studies*, 17(1), pp. 50–69. doi: <https://doi.org/10.1093/jrs/17.1.50>.
- Pugliese, J. (2009) 'Crisis heterotopias and border zones of the dead', *Continuum*, 23(5), pp. 663–679. doi: <https://doi.org/10.1080/10304310903183627>.
- Rauchkyte, T., Hargreaves, D. J. and Pawlak, Z. (2006) 'Determination of heavy metals and volatile aromatic compounds in used engine oils and sludges', *Fuel*, 85, pp. 481–485. doi: <https://doi.org/10.1016/j.fuel.2005.08.004>.
- Roche, D. et al. (2017) 'Environmental Impacts of the Border Wall', *The Environmental Law Reporter*, 47(6), pp. 10477–10487.
- Rogowska, J. and Namieśnik, J. (2013) 'Environmental Risk Assessment of WWII Shipwreck Pollution', in Sharma, S. and Sanghi, R. (eds) *Wastewater Reuse and Management*. Dordrecht: Springer.
- Ruggiero, V. and South, N. (2010) 'Critical Criminology and Crimes Against the Environment', *Critical Criminology*, 18(4), pp. 245–250. doi: <https://doi.org/10.1007/s10612-010-9121-9>.
- Sanfilippo, F. and Scialoja, A. (2010) *A Lampedusa. Affari, malaffari, rivolta e sconfitta dell'isola che voleva diventare la porta d'Europa*. Castel Gandolfo: Infinito.
- Scifo, A. D. (2020) *Lampedusa, incendio doloso nel 'cimitero' delle barche dei migranti*, *La Repubblica*. Available at: https://palermo.repubblica.it/cronaca/2020/06/06/news/lampedusa_incendio_doloso_al_cimitero_delle_barche_dei_migranti-258556882/ (Accessed: 11 June 2020).
- Sciortino, G. (1999) 'Planning in the Dark: The Evolution of Italian Immigration Control.', in Brochmann, G. and Hammar, T. (eds) *Mechanisms of Immigration Control: A Comparative Analysis of European Regulation Policies*. London: Bloomsbury Academic. doi: <https://doi.org/10.1017/CBO9781107415324.004>.
- Shearing, C. (2015) 'Criminology and the Anthropocene', *Criminology and Criminal Justice*, 15(3), pp. 255–269. doi: <https://doi.org/10.1177/1748895815584712>.
- Sheavly, S. B. and Register, K. M. (2007) 'Marine debris & plastics: Environmental concerns, sources, impacts and solutions', *Journal of Polymers and the Environment*, 15, pp. 301–305. doi: <https://doi.org/10.1007/s10924-007-0074-3>.
- SkyTG24 (2011) *Sicilia, quelle barche dei migranti che finiscono al macero*. Available at: https://tg24.sky.it/cronaca/2011/06/24/lampedusa_emergenza_immigrati_che_fine_fanno_i_barconi_discarica.html (Accessed: 11 March 2020).
- Soliman, F. (2021) 'States of exception, human rights, and social harm: Towards a border zemiology', *Theoretical Criminology*, 25(2), pp. 228–248. doi: <https://doi.org/10.1177/1362480619890069>.
- South, N. (2015) 'Anticipating the Anthropocene and greening criminology', *Criminology and Criminal Justice*, 15(3), pp. 270–276. doi: <https://doi.org/10.1177/1748895815584719>.
- Stephenson, M. A. (1993) 'Vessel-Source Pollution Under the Law of the Sea Convention - an Analysis of the Prescriptive Standards', *University of Queensland Law Journal*, 17(2), pp. 267–286.
- Surico, G. (2020) *Lampedusa: dall'agricoltura, alla pesca, al turismo*. Firenze: Firenze University Press.
- Trouwborst, A., Fleurke, F. and Dubrulle, J. (2016) 'Border fences and their impacts on large carnivores, large herbivores and biodiversity: An international wildlife law perspective', *Review of European, Comparative and International Environmental Law*, 25(3), pp. 291–306. doi: <https://doi.org/10.1111/reel.12169>.
- Wang, S. et al. (2017) 'The harm of petroleum-polluted soil and its remediation research', *AIP Conference Proceedings*, 1864, pp. 020222/1–8. doi: <https://doi.org/10.1063/1.4993039>.
- White, R. (2002) 'Environmental harm and the political economy of consumption', *Social Justice*, 29(1), pp. 82–102.
- White, R. D. (2013) *Environmental Harm: An Eco-justice Perspective*. Bristol: Policy Press.
- Wright, S. (2014) 'Lampedusa's Gaze: Messages from the Outpost of Europe', *Italica*, 91(4), pp. 775–802.

Ziniti, A. (2018) *Lampedusa: condanna definitiva, va in carcere l'ex sindaco De Rubeis*, *La Repubblica*. Available at: https://palermo.repubblica.it/cronaca/2018/01/31/news/lampedusa_condanna_definitiva_va_in_carcere_l_ex_sindaco_de_rubeis-187693330/?ref=search (Accessed: 16 August 2019).

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.