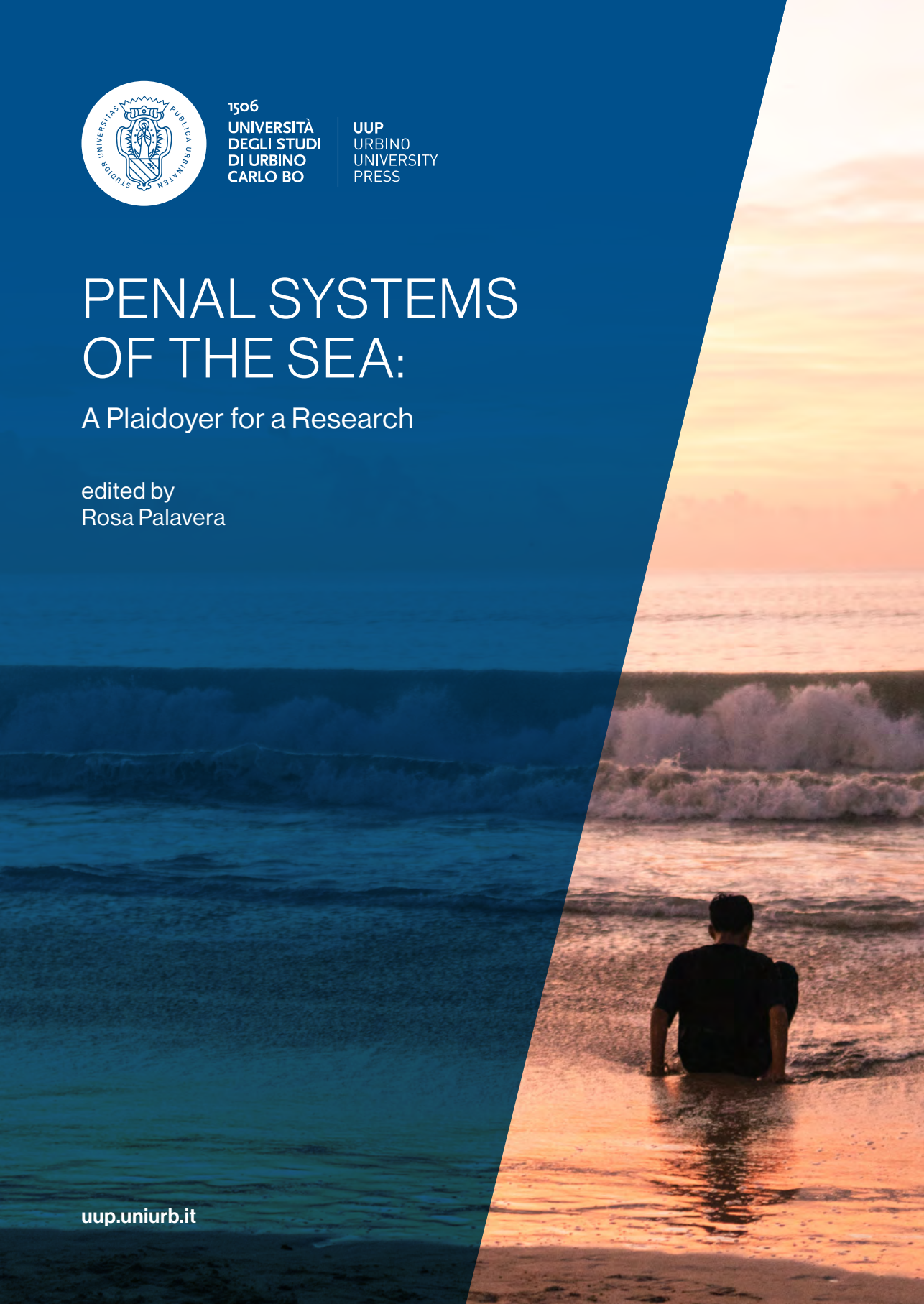
1506
UNIVERSITÀ DEGLI STUDI DI URBINO CARLO BO

UUP
URBINO UNIVERSITY PRESS

PENAL SYSTEMS OF THE SEA:

A Plaidoyer for a Research

edited by
Rosa Palavera



uup.uniurb.it

IEP
INCONTRI
E PERCORSI
N.06

INCONTRI E PERCORSI è un collana multidisciplinare che nasce nel 2022 e raccoglie le pubblicazioni di convegni e mostre promossi e organizzati dall'Università di Urbino.

Volumi pubblicati

01.
Le carte di Federico. Documenti pubblici e segreti per la vita del Duca d'Urbino (mostra documentaria, Urbino, Biblioteca di san Girolamo, 26 ottobre - 15 dicembre 2022), a cura di Tommaso di Carpegna Falconieri, Marcella Peruzzi, UUP 2022

02.
Paolo Conte. Transiti letterari nella poesia per musica, contributi di studio a cura di Manuela Furnari, Ilaria Tufano, Marcello Verdenelli, UUP 2023

03.
Il sacro e la città, a cura di Andrea Aguti, Damiano Bondi, UUP 2024

04.
Diritto penale tra teoria e prassi, a cura di Alessandro Bondi, Gabriele Marra, Rosa Palavera, UUP 2024

05.
Federico da Montefeltro nel Terzo Millennio, a cura di Tommaso di Carpegna Falconieri, Antonio Corsaro, Grazia Maria Fachechi, UUP 2024

1506
UNIVERSITÀ DEGLI STUDI DI URBINO CARLO BO
UUP URBINO UNIVERSITY PRESS

PENAL SYSTEMS OF THE SEA:

A Plaidoyer for a Research

edited by
Rosa Palavera

PENAL SYSTEMS OF THE SEA: A PLAIDOYER FOR A RESEARCH
edited by Rosa Palavera

Studies and notes following the meeting Penal Systems of the Sea: "Liquid Law" or Hard Case?, Università degli Studi di Urbino Carlo Bo, Urbino, Italy, May 24th, 2024.

This volume was published with the financial support of the Università degli Studi di Urbino Carlo Bo as part of its programs to promote and disseminate scientific research.

Progetto grafico / Graphic design
Mattia Gabellini

Referente UUP / UUP contact person
Giovanna Bruscolini

On cover: photo by Mattia Gabellini

PRINT ISBN 9788831205573
PDF ISBN 9788831205559
EPUB ISBN 9788831205566

Le edizioni digitali online sono pubblicate in Open Access su: https://uup.uniurb.it

Via Aurelio Saffi, 2 | 61029 Urbino
https://uup.uniurb.it/ | e-mail: uup@uniurb.it

L'edizione cartacea del volume può essere ordinata in tutte le librerie fisiche e online ed è distribuita da StreetLib (https://www.streetlib.com/it/)

SOMMARIO

PROTECTING SEA ECOSYSTEM FROM TSUNAMI RISK AND FROM RISK OF MARINE POLLUTION IN THE INTERNATIONAL LEGAL FRAMEWORK

Cecilia Valbonesi
Università degli Studi di Roma "Unitelma Sapienza"

1. THE REASONS AND THE OBJECT OF THE INVESTIGATION

Θάλλαττα! θάλλατα! cried joyfully the Ten Thousand Greeks sawing Euxeinos Pontos (the Black Sea) from Mount Theches near Trebizond after participating at Cyrus the Younger's failed march against the Persian Empire in the year 401 B.C.

This story, as well known, is told by Xenophon in his famous *Anabasis*.

More than two millennia later, the encounter with the sea, although for different reasons, is an element of certain fascination and reverence for those who approach it with due respect.

Yet the most short-sighted economic policies, perpetrated by almost all industrialized Countries, have made the sea a place devoted to the exploitation of resources and subjected to the action of terrible pollutants, such as plastic, that do not result from macro-events but from systemic choices whose consequences will be suffered for many generations.

Similarly, the construction of a relationship with the sea that guarantees, especially for citizens living in coastal areas, effective protection against atmospheric phenomena and natural phenomena of significant destructive power is still going on.

In this dual role as a risk factor and as a legal asset in need of protection, the sea once again becomes an emblem of conflicting demands and a *liquid* space for policies to safeguard its ecosystem which, to date, have not achieved the desired results.

There are many reasons for this, and the narrow scope of this investigation does not permit the socio-economic analysis that underpins the

reasons for the lack of international and uniform protection of the sea, as both subject and object of risk.

Well then, wishing to recall a well-known but still very topical key to the interpretation of the relationship with the marine ecosystem, it is worth emphasizing the still-present difficulty of considering sea as a legal asset in itself and likewise as an element in itself harbinger of causing damage to the population.

The dismiss of a functionalist idea in which the ecosystem receives protection because of its propaedeuticity to safeguarding human health and life could be a valid support to overcome the most serious distortions caused by the anthropocentric approach.

If, in fact, the instrumentalization of the system of criminal protection of the marine ecosystem for man safeguarding, has given rise to a fragile and decontextualized protection on which we will try to dwell during our reflections.

Similarly, protection from the sea conceived in a victimological vision has given rise to the pretermission of the categories of fortuitous event and force majeure.

If, on the one hand, what is lacking today is a system of protection that guarantees the integrity of the legal asset environment, *sub specie* of the marine ecosystem, on the other hand, secularly, the failure to recognize its identity generates an excess of human responsibility that sees man constantly subjected to a criminal reproach for all the consequences of natural phenomena.

In this complementarity and secularity lies the reason why it appears necessary here to address both faces in which the marine environment plays a relevant role for criminal law.

Today, however, the degeneration of anthropocentrism, characterized by a circularity of effects that is very inauspicious, is gradually giving way to an eccentric approach, recently sanctioned also by Italian Constitution, which, in Art. 9 not only elevates the environment, biodiversity and the ecosystem (and therefore also the marine ecosystem) to constitutionally protected assets[1], but places them in a global intergenerational perspective[2], guaranteeing the 'rights of future generations'.

1 In contrast to Art. 41 of the Constitution, which guarantees a balance with strong anthropocentric features.

2 This principle was first upheld by the *Corte costituzionale* in its judgment 105/2024, Pres. Barbera, Rel. Viganò. Previously, of great interest, see: Nevola-Verrengia-Prestipino, 2023.

Talking about 'future generations' acknowledges and authorizes an international opening in the protection of the marine ecosystem and the approach to the sea as a life-threatening element.

However, the international dimension of the protection *of the* sea shows profound differences with the protection *from the* sea.

If the latter is characterized by the absence of a uniform and binding regulatory framework, relying mainly on *soft law* harmonization instruments and leaving the repression of the unfortunate consequences of adverse events entirely to the often very different choices of individual countries, the same cannot be said for the former.

The protection of the sea, as a legal asset, is not only entrusted to the harmonization of European Directives and international Conventions on which we shall have the opportunity to dwell but is at the Centre of a very broad debate that is presumably destined to lead to the creation of ecocide as an international crime.

To appreciate this profound dissimilarity, it is therefore necessary to first dwell on the original core of the reflection that focuses on the marine ecosystem as a risk factor, with particular attention to the tsunami risk in its historical and legal dimension, characterized by an exquisitely national criminal response, not free from deep criticalities and distortions and categorize by the debate on the role of *soft law* in that sector.

In a specular manner, we will then deal with the protection of the sea as a declination of the broader legal asset of the environment, immediately framed in a regulatory system that is an expression of deference to the demands of European and international law, which has progressively evolved over time to open up to an incremental offences that are not always accompanied by deference to the principle of criminal law.

Remarkable questions, in this sense, are raised by the new Directive (EU) 2024/1203 of the European Parliament and of the Council of 11 April 2024 on the protection of the environment through criminal law and replacing Directives 2008/99/EC and 2009/123/EC, which not only aims at harmonizing the regulation of environmental offences within national criminal laws, by providing for a more binding protection, inspired by precautionary and preventive principles, and aimed at restoring, or in any case compensating, the environmental damage caused, according to the "polluters should pay" principle, but above all prescribes to Member States the incrimination of the crime of ecocide, in the wake of the broader international debate aimed at introducing this offence in the list of crimes punished by the International Criminal Court.

Once this framework has been traced, it will be possible to outline some lines of research that, *de iure condendo*, taking note of the critical aspects of the current system, will help to harmonies the two faces of protection within the international framework and with harmonization tools not exclusively entrusted to the *ius terribile*.

2. CRIMINAL PROTECTION FROM THE SEA: NEW TOOLS FOR AN OLD RISK

The history of the peoples and cultures that have sailed the seas for millennia has handed down to us an attitude of deep fascination and equal awe towards the sea.

To limit ourselves to our Mediterranean, classical literature provides us with a very rich tradition in which the sea constitutes the setting for dramatic stories, characterized by catastrophic outcomes, mostly propitiated by divinities hostile to seafarers.

Among the most fascinating narratives are those related to tsunami risk, which reveal a singular pervasiveness and awareness of often peculiarly destructive phenomena.

If already in the Odyssey (4.505-10) Poseidon is accredited with the power to break mountains and sink coastlines, some fonts attribute to him the role of direct or indirect cause of a seismic event, as happened in relation to the earthquake of 464 B.C. when Thucydides (1.28.1) attributes to the Spartans the belief that it was due to a sacrilege committed against Poseidon[3]. A similar opinion is also handed down to us with reference to the earthquake in the Gulf of Corinth in 474 B.C. in relation to which Xenophon (Hellenes 4.7.4) recalls that when an earthquake began, they used to intone the *peana*, i.e. a religious choral song, dedicated to Poseidon.

But Poseidon is above all blamed for the famous tsunami in Argos, described by Pausanias (2.22.04): «Here [in Argos] is the sanctuary of Poseidon called Proclistio [i.e. bathing with the waves]. For they say that Poseidon submerged most of the region, becausé Inachus and the other judges had decreed that the region belonged to Hera and not to him. Then Hera obtained from Poseidon that the sea turned back; the Argives then dedicated a shrine to Poseidon Proclistius, at the point where the waves

3 Thucydides 1996. For a broader contextualization see Guidoboni – Comastri – Traina 1994: 504.

receded». In the Roman world, where Poseidon takes the name of Neptune, there is no shortage of references to tsunami as the result of his will. Indeed, the poet Ovid (*Met.* 11.199-215) tells us that «the lord of the sea directed all the waters to the shores of greedy Troy, turned the land into a sea, deprived the farmers of the produce of the soil and covered the fields with waves».

The cultural matrices that are rooted in the literary sources recalled so far undergo a singular process of oblivion that is accompanied by a complete underestimation of the incidence of the tsunami risk not only in Italy but also throughout the Mediterranean, if not the entire world.

The Pacific Tsunami Warning Center (PTWC), the official tsunami warning centre in the U.S. began in 1949 as a response to the 1946 tsunami generated in the Aleutian Islands that devastated Hilo[4].

Since 1965 the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) has been responsible for the intergovernmental coordination of the Pacific Tsunami Warning System (PTWS). Following the 26 December 2004 tsunami in the Indian Ocean, the IOC Member States requested at the 23rd IOC Assembly (June 2005) that similar warning systems be developed in the Indian Ocean (IOTWS), the Caribbean (CARIBE-EWS) and the North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (NEAMTWS).

The Mediterranean has hosted one of the deadliest tsunamis ever, generated by the A.D. 365 Crete earthquake. Another major tsunami with more than one hundred thousand of casualties and severe damage to coastal cities occurred in 1908 (Messina, Italy). As recently as 2002 (Stromboli, Italy), and 2003 (Boumerdes, Algeria) tsunamis were generated, though fortunately these were not very damaging. The North East Atlantic area is also an area at risk where well-known earthquake sources can generate a tsunami causing extensive loss of life and property as did the famous 1755 Lisbon earthquake, whose ensuing tsunami impacted not only the Portuguese coasts but also those of Spain, Morocco and the Caribbean.

After ten years of development NEAMTWS has now entered a phase where four National Tsunami Warning Centres in France, Greece,

4 For more details see https://www.tsunami.gov/?page=history#:~:text=Pacific%20Tsunami%20Warning%20Center%20(PTWC)&text=Official%20tsunami%20warning%20capability%20in-,house%20the%20Honolulu%20Geomagnetic%20Observatory.

Italy, and Turkey, act as Tsunami Service Providers (TSP) and provide tsunami alerts to other NEAMTWS Member States[5].

In Italy, after more than two years of testing earthquakes and tsunamis on a global scale, the Tsunami Alert Center (CAT), together with its Greek, French and Turkish counterparts, was accredited during the thirteenth session of the ICG (Intergovernmental Coordination Group) - NEAMTWS in September 2016. The CAT then went into operational mode on 1 January 2017, in agreement with the National Department of Civil Protection (DPC).

This very brief excursus on the genesis of the choices of protection against the risk of tsunami allows us to immediately highlight a peculiar characteristic of the system that we are going to analyze here, without claiming to be exhaustive.

This is the international background, a feature rich of profound implications on the instruments of protection and on the choices related to the penal protection of such a complex risk.

In fact, the international matrix of tsunami risk management poses some essential questions to the criminalist that focus on: 1. The choice of protection instruments, their place in the Civil Protection organization and the consequences in terms of criminal liability; 2. The presence of a rich and complex regulatory framework of tsunami risk management emanating from international bodies, the possibility of counting it among the *soft law* instruments and its impact on negligent liability for macro-events.

2.1. THE ITALIAN TSUNAMI WARNING SYSTEM

In the context of the Italian legal system, the management of tsunami risk presents structural peculiarities that raise interesting questions regarding criminal liability for unfortunate events that may result from incorrect choices.

It is worth briefly mentioning the structure deputed to oversee tsunami risk management, which finds its main protagonist in the INGV Tsunami Warning Centre (henceforth CAT), accredited as the Mediterranean Tsunami Service Provider within the NEAMTWS (North-Eastern Atlantic and Mediterranean Tsunami Warning System) of UNESCO.

5 For these aspects see UNESCO DIGITAL LIBRARY, 10 Years of the North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (NEAMTWS) Accomplishments and Challenges in Preparing for the Next Tsunami, available at https://unesdoc.unesco.org/ark:/48223/pf0000247393.

As mentioned, in 2017 the CAT entered its full operational phase, a circumstance that led to the need to regulate its relations with the other institutional actors involved in tsunami risk management.

This led, *first of all*, to the issuance of the Directive of the Council of Ministers establishing the 'National Warning System for Earthquake-Generated Tsunamis-SiAM', published in the Official Gazette on 5 June 2017, and *in secundis*, to the inclusion of the service in Annex A - Service Activities, of the "Framework Agreement between the Civil Protection Department and the National Institute of Geophysics and Volcanology for seismic and volcanic surveillance activities on the national territory, technical-scientific advice and studies on seismic and volcanic risks"[6].

The Directive and Annex A (in relation to CAT - DPC relations) represent the disciplinary framework in which, at a national level, the object of the service, the methods of its provision, the coordination profiles, and the growth and development objectives are established (the latter, in fact, are better determined in Annex B of the INGV - DPC Framework Agreement).

Each competence profile outlined corresponds to an equal technical and scientific responsibility in warning delivery.

This framework is the starting point for the subsequent documents that individually or jointly regulate the operational profiles of CAT.

Among them, particular importance must be given to the *Indications for updating civil protection planning for the tsunami risk*, issued to the Directive of the President of the Council of Ministers of 17 February 2017, published in the Official Gazette no. 128 of 5 June 2017 on the "Establishment of the National Warning System for Earthquake-Generated Tsunamis- SiAM" and *Decreto Legislativo* no. 1 2018 "Civil Protection Code"[7].

The indications are intended for Italian municipalities which must (or rather, should have long ago) updated their Civil Protection Plans to the tsunami risk, as an implementation measure with a greater impact than safeguarding the population.

If the municipalities are therefore entrusted with the task of implementing civil protection measures for populations prone to tsunami risk,

6 The text of the directive is available at https://www.protezionecivile.gov.it/it/normativa/direttiva-pcm-istituzione-siam-0/

7 The text is available at https://www.protezionecivile.gov.it/it/normativa/indicazioni-alle-componenti-ed-alle-strutture-operative-del-servizio-nazionale-di-protezione-civile-per-l-aggiornamento-delle-pianificazioni-di-protez/

they are not, however, part of the organizational structure identified by the SiAM Directive, which sees the INGV CAT, ISPRA and the National Department of Civil Protection (DPC) involved in the management of the risk in question.

The complex multi-individual structure in charge of risk management poses numerous questions for the criminal law.

However, the *sedes materiae* allows us to devote attention to profiles of greater impact, related to the multi-individual nature of risk management, the peculiar aspects of the duty to act.

Let's start with the first one.

2.2. THE MULTI-INDIVIDUAL NATURE OF TSUNAMI RISK MANAGEMENT IN SIAM

The legal and regulatory framework outlined by the sources shows that the first functional segment of a complex institutional system for managing a natural risk must be identified in the INGV CAT.

The national and international combination in which CAT is embedded constitutes the systemic datum from which to start to make explicit, from the very beginning of this study, the hermeneutic coordinates that must be followed for a congruous and exhaustive determination of the potential responsibilities arising from the service provided.

Regarding the national profile, the location of the CAT in the SiAM organization, codified by the Directive of the Council of Ministers of 17 February 2017, published in the Official Gazette on 5 June 2017, highlights the scientific role reserved for the Centre (para. 1; 1.1) and its centrality in the alerting system. Para. 1.3., in conjunction with Annex 3, defines the messages that the CAT must send out in the event of an alert and regulates the technical-scientific prerequisites (these are: information - alert - update - revocation - confirmation - end of event).

The Directive also specifies the limits of the service offered, the procedures in the event of malfunctions and, above all, the flow of information between the various actors in the service (section 1.4).

The CAT's area of competence takes on an exquisitely technical-scientific face and is functionally placed in a prodromal and instrumental moment for the start-up of the complex Civil Protection machine, which constitutes the center of imputation of both preventive-educational activities for the population, and alarm and rescue activities in the event of a tsunami.

No responsibility can be attributed to the INGV operators if the harmful event must be attributed to the exclusive responsibility of the other two SIAM actors, namely ISPRA and DPC.

To better understand this assertion, it is necessary to make explicit that the meaning of tsunami risk coincides with the notion contained in the Directive of the President of the Council of Ministers (G.U. 5 June 2017).

This risk is originated by seismic events that may take place in the Mediterranean Sea, which may generate an anomalous variation of the sea level, capable of impacting the coastlines of our peninsula. As established by the Directive, «the CAT is activated for seismic events of an estimated magnitude equal to or greater than 5.5 that occur exclusively in its area of competence» defined in Annex 1 of the Directive itself.

It also specifies the methodologies and scientific parameters adopted to ensure the warning, resulting of precise methodological options taken by scientists and technicians.

Certainly, the heated scientific debate and the profound differences in the community of reference fuel a certain anxiousness in the criminalist, who is used to trusting in the existence of an epistemic parameter as uniform as possible to guide the operator's decisions and the judge's decisions.

But so be it: the relative youth of this science prevent the individual actors from expressing convergence profiles on certain central aspects and, indeed, seems to exacerbate the differences between the choices adopted in the various centers.

Certainly, emblematic is the issue concerning the use of the decision matrix, a central element in determining the expected level of alert for the current potentially tsunami: the chosen solutions appear to differ even in those centers (not all) that have decided to adopt this tool[8].

Undeniably, therefore, the epistemological framework of tsunami risk is profoundly varied and sometimes contradictory.

The circumstance induces an even more serious fear when one reflects on the nature of the tsunamigenic risk: in fact, unlike the seismic risk, it is characterized by an exquisitely predictive nature. The CAT operator communicates a technical-scientific datum, the result of a complex elaboration (as well as suffering from great uncertainty), prodromal to the potential occurrence of a natural event harbinger of dangers for infrastructures and for the safety of citizens.

8 These discrepancies were evident during the events in Chile in 2010 and in Japan in 2011.

It is easy, therefore, to understand how this dual uncertainty - of the scientific datum reflected in the predictive datum - is also a harbinger of potential difficulties when determining liability for the event.

This circumstance becomes even more decisive in view of the multi-individual face of risk management before which we must reflect carefully in order to correctly delineate the framework of responsibilities arising from it.

The focus of this reflection lies in the need to counter an approach, admittedly common in a certain jurisprudence, designed to extend the blame of negligence for unfortunate events arising from the complex management of a risk to all those who were formally or substantially involved, without focusing attention on the real existence of real prerequisites capable of founding a real liability.

In the economy of this analysis, it is not superfluous to recall, first of all, how multi-individual offence can arise from a concurring phenomenology of the crime and, in particular, from a context of negligent cooperation[9].

Excluding, in fact, that in the case we are dealing with, there may be a consciousness and intention to harm or endanger human lives, it is more realistic to assume that several persons cause an event involuntarily through the violation of a precautionary rule aimed at preventing it and which each of them was required to observe. This is possible when several professionals are involved in the management of the same risk. In particular, the management of the alert may represent negligent cooperation when the conduct giving rise to the offence takes place in a synchronous context.

As doctrine points out, in order to be culpable there must be the following conditions: «1. the non-intentional nature of the criminal act; 2. the intention to materially or psychologically contribute to the perpetration of the conduct (common or by others) contrary to precautionary rules or risky and the cause of the event; 3. the foreseeability or foreseeability and avoidability of the criminal event» (F. Mantovani - Flora 2023: 549).

A different responsibility will occur in the event that several negligent conducts contribute to determining the event, remaining disjointed from each other. For example, the combination of the SiAM, made by the synergy between ISPRA, CAT and DPC, determines the possibility that the same event may be causally attributable to several negligent conducts, even independent of each other, carried out in a diachronic dimension[10].

9 *Ex plurimis* Corbetta 2015: 1806 ss.; Losappio 2012; Spasari 1956.

10 Fiandaca - Musco 2019: 614, where it is pointed out that the discrimen between cooperation and

Let us consider the case where a tsunami hits the Italian coast and causes casualties. It is quite possible that the death of people is the product of a causal synergy between radically different factors, such as a wrong communication of the risk, associated with a failure by the local authority obliged by law (the municipality) to provide warning. The coexistence of these forms of conduct determines the liability of all the persons who have given rise to it where, certainly, they assume a causally relevant value and none of them acts as an interruptive causal factor capable, pursuant to Art. 41, para. 2 of eliding the others' liability[11].

Determining whether the participating conduct gives rise to a case of negligent cooperation represents profoundly different consequences in substantive and procedural terms, such as the uniformity of the title of the offence for all the parties involved, between all.

In the SiAM system the conduct of the individual operators is therefore connected and functional to a converging purpose. The circumstance would lead to an application of the indictment of negligent cooperation (Art. 113 Italian Criminal Code) where several conducts, implemented by different operators, pertaining to different entities and at different stages of development of the same risk give rise to the event.

This consideration must be enriched with the other essential profile of criminal negligence, this element (*mens rea*). We have said that the connection of the conduct from the subjective point of view represents the founding element of culpable cooperation in which the participants are "mutually aware", as the Supreme Court considers, of «contributing with the action or omission of others to the production of the unintended event» or, as better expressed by doctrine, are endowed with the consciousness and will to concur «in the conduct that violates the precautionary rules of conduct»[12].

This awareness connotes the negligent face of the conduct and represents the element of ontological and functional connection towards the

concurrence of autonomous causes is constituted by the existence or non-existence of a psychological link between the different agents.

11 Arts. 41(2) and 45 of the criminal code regulate the concurrence of pre-existing, concomitant and supervening causal factors that exclude the causal relationship insofar as they allowed the occurrence of an event that was not even a probable consequence of the conduct.

12 F. Mantovani - Flora 2023: 550 and in the same sense M. Gallo 1957: 116. Contra Boscarelli 1958: 98, who maintains the irrelevance of awareness of cooperation in causally oriented cases; although with different nuances, see also: Pannain 1985, 168. Fiandaca - Musco 2019: 614, where it is pointed out that the discrimen between cooperation and concurrence of autonomous causes is constituted by the existence or non-existence of a psychological link between the different agents.

production of the harm. The importance of the subjective element of the offence (*mens rea*) is questioned by the *Sezioni Unite Penali* of the Italian *Corte di Cassazione*, which recalled how «the borderline between the case of culpable cooperation and that in which the concurrence of independent culpable causes is configured is often uncertain». The Court states, in fact, that part of the jurisprudence has placed excessive emphasis on the «indicated psychological trait» (i.e. the awareness of the other's culpable conduct).

It is necessary to require that the awareness of the cooperation in the action or omission of others must involve not only the structural and operational profile of the risk management *sub specie* of the behavior which can have violate precautionary rules, functional to the risk management.

However, the *Sezioni Unite* also stated that «each agent must act taking into account the role and conduct of others. This generates a link and an integration between the conducts that operates not only on the level of action, but also on the precautionary regime, requiring each one to relate to, and be concerned about, the conduct of the others involved in the context. This claim of prudent interaction identifies the canon for defining the basis and limits of the fault of cooperation»[13].

Every interaction must therefore be characterized by a "mutually critical and dialectical relationship" that, in the writer's opinion, goes as far as awareness and dutiful dissent expressed against the wrong choices of others.

2.3. THE RELATIONSHIP BETWEEN NEGLIGENCE AND OMISSION IN TSUNAMI RISK MANAGEMENT

Moreover, the complex identification of the boundary between a multi-individual offence and a singular one, suffers, in our context, from a difficulty related to the correct identification of the positions of guarantee and the relative sources susceptible to assume relevance in the tsunami risk management system.

13 Cass. Sec. Un., 18 September 2014, no. 38343 in DeJure. The judgment states how «the glueing factor of the different conducts» is identified in the «psychological» profile by both prevailing doctrine and case law. The Court states how «it is the awareness of cooperating with others». There is no unanimity, however, as to whether «this awareness must extend to the point of grasping the culpable character of the conduct of others». In fact, there is an oscillation between the thesis of the mere awareness of the conduct of others, which, however, ends up disproportionately broadening the indictment, and the thesis that requires the «awareness of the culpable character of the conduct of others» which «carries the risk of emptying the rule and rendering it useless».

As is well known, the identification of the boundary between culpable active conduct and culpable omissive conduct is not in itself an easy task, since in the violation of the precautionary rule, the heart of the negligence, there is already in itself a *non facere quod debetur* of criminal importance. As has been correctly emphasized, negligence and omission have numerous identity profiles including «the common regulatory nature and the subjection to similar teleological connection criteria […], just as the existence of culpable causation of the event cannot be affirmed when the event does not fall within the protection sector of the violated obligation, similarly, positions of guarantee do not have an indistinct and unlimited sector of obligations: even in the case of omission, the content and teleological direction of the obligation of guarantee must be verified» (Gargani 2000, 581 ff.).

These identity profiles founded the pivot of a widespread work of interpretation aimed at transforming the culpable offence into an improper omissive offence and realized through the valorization of the "omissive face" that characterizes the violation of the rule of diligence.

The suggestions that this identity can offer must not, however, mislead as to the real presence of two profiles that are «logically functionally distinct» (Giunta 1999: 625 ff.; Gargani 2000). In fact, «the position of guarantee indicates the duty to act and the legal right in respect of which the action must perform its protective function; the duty of care (as specified by the prudential rule that completes it) indicates the manner of conduct imposed by the position of guarantee» (Giunta 1999).

The difference between the omissive moment and the negligent moment also appears to be reinforced by a consideration based on a diachronic profile of the development of the criminal dynamic since «the duty of guarantee logically arises before the duty of diligence»: where the duty to act is lacking, it should be entirely useless to verify negligent conduct.

The priority check on the existence of the culpable negligence makes it easy for the interpreter to deduce from it the three cardinal profiles of the *non facere quod debetur*: the existence of a rule underlying the action, the omissive moment inherent in the failure to comply with it, and the active ownership of the obligation incumbent on the subject burdened . The result that follows unveils a scenario of plain violation of the cardinal principles of criminal responsibility.

On closer inspection, this process of inversion does not only affect the verification of the existence of the prerequisites for omissive liability,

but also infects the assessments regarding active conduct causing the event (Gargani 2013).

The "omissive moment of negligence" represents, therefore, a test case for the tightness of the criminal justice system, so much so that the natural overlaps that may arise require the determination, as clear as possible and *ex ante*, of the active or omissive coefficient of the responsibilities incumbent on the persons called upon to manage a source of risk.

The physiognomy of the obligation to prevent the event must take into account the specific context in which it occurs. Tsunami risk management is a peculiar area that, however, is likely to participate in the issues and reflections developed with reference to the broader relationship between criminal law and natural hazards.

The sector of natural risks has long suffered from a phenomenon of hyper-criminalization that leads to an over responsibility both to scientists and to civil protection, often in disregard of the orthodoxy of criminal negligence. It has been pointed out that since 2008 «the intervention of the judiciary following natural disasters has become increasingly evident with a genuine escalation of new investigations and criminal proceedings» (Amato 2015: 391 ff.).

These prosecutions often result in convictions, which are a symptom of a growing claim to the attribution of obligations to manage and prevent unfortunate events linked to the phenomenology of risk. The underestimation of prevention policies, associated with a tendency to not responsibilize individuals, increases the tendency to identify a *scapegoat* in contexts in which, it is fair to say, there is undoubted scientific uncertainty.

The existence of cognitive gaps about management and prevention of certain risks is associated with a plurality of equally valid scientific and operational solutions developed by the community of scientists and technicians.

If this scientific uncertainty represents the first element that perturb the reconstruction of a duty to act, and more generally of a negligent responsibility obsequious to criminal principles, the second of the aspects that contribute to fueling a complexity that is difficult to manage.

In fact, it is a matter of the plurality and complementarity of the sources on which the obligatory positions intended to protect the population from the tsunami risk are based. Alongside the obligations identified by the Civil Protection Code, *Decreto Legislativo* no. 1 2018, there are the institutional prerogatives identified in detail by the aforementioned SiAM

Directive and by the operational protocols that regulate the institutional relations between the actors involved.

To this tripartition must be added international sources, among which the Tsunami Ready Programme must play a decisive role.

The Tsunami Ready Programme, which is being piloted in many Italian coastal cities, as well as in many European and South Pacific communities, is governed by UNESCO IOC Document No. 74 of 2022[14].

As stated: «The Tsunami Ready programme seeks to build resilient communities through awareness and preparedness strategies that will protect life, livelihoods, and property from tsunamis in different regions. The main goal of the programme is to improve coastal community preparedness for tsunamis and to minimise the loss of life, livelihoods, and property. This is achieved through a collaborative effort to meet a standard level of tsunami preparedness through the fulfilment of a set of established indicators» (*ibid.*). Indeed «The Tsunami Ready programme is implemented as a voluntary, performance-based community recognition programme that promotes an understanding of the concept of readiness as an active collaboration among national and local warning and emergency management agencies and government authorities, scientists, community leaders, and the public» (*ibid.*).

The programme explicitly points out that «Although communities can be recognised as being 'Tsunami Ready', this recognition does not imply approval or promise that a community can or will perform at a certain level in case of tsunami. Tsunami Ready recognition does not mean that a community is tsunami proof; it is rather the acknowledgement and recognition that a community has adopted mitigation measures to cope with their tsunami risk» (*ibid.*).

Talking about Tsunami Ready introduces us to the broader topic of the role that can be recognized in the copious international regulations on tsunami risk management, mainly fed by documents issued by NEAMTWS as well as, in some cases, by Intergovernmental Oceanic Commission, which crystallize the empirical data accrued in tsunami risk management in documents that certainly cannot be ignored by those around the world who are called upon to preserve population's safety.

14 Available at https://www.ioc.unesco.org/en/tsunami-ready-programme

No less important is the international dimension in which the Tsunami Warning Centre embodies itself: the accreditation of Tsunami Alert Center (CAT) with NEAMTWS is the result of a complex procedure aimed at demonstrating that it possesses the technical-scientific requirements dictated as condition sine quibus not to rise to the rank of Tsunami Service Provider.

The affiliation of the INGV CAT to the NEAMTWS represents an obligation to comply with the international standards necessary for the tsunami warning and at the meantime impose to submit the technical and scientific choices made to to the highest international forum (NEAMTWS), which will be able to express an opinion on their appropriateness.

As far as the international aspect is concerned, it should be remembered that the progressive anchoring of risk management profiles to scientific knowledge shared by the national and international community of reference makes the role of the NEAMTWS crucial, at least in two respects. First, the NEAMTWS represents the forum for international scientific comparison and constitutes the place where the epistemological and operational choices adopted by the various international centers are discussed and eventually approved.

Secondly, the NEAMTW, already called upon to act as the official accrediting body of European Tsunami Warning Centers (among which, obviously, also the CAT), represents - and will represent in the future - that third and authoritative body called upon to validate the documents expressing the technical-scientific choices of the INGV CAT (job descriptions, guidelines and protocols).

But that is not all. As we have mentioned, the most important aspect lies in the regulation of risk management entrusted to the documentation drawn up by the various Tsunami Warning Centers all around the word, which make available to the international community knowledge condensed into guidelines that are, in most cases, the result of shared experience.

These are valuable documents, such as the Intergovernmental Oceanographic Commission Tsunami watch operations: global service

definition document, n. 130[15], or the Intergovernmental Oceanographic Commission Plans and Procedures for Tsunami Warning and Emergency Management, n. 76[16].

The influence of these provisions in the national legal framework, with reference to the objective and subjective element of the criminal offence (actus reus and *mens rea*), presupposes the answer to the question as to whether, due to their characteristics, they have the status of *soft law*.

As emphasized by doctrine, «Soft law refers to instruments such as declarations, recommendations, codes of conduct, action plans, expert opinions, and handbooks. Soft law is produced by state actors, international organisations, civil society organisations, multinationals, trade associations, and legal experts» (Bergtora Sandvik 2018). There is no doubt that «soft law can harden over time through state action, for example, as treaties or as customary law. In the context of the continued proliferation of lawmaking procedures and sites, soft law is many things to many actors: political and legal actors see soft law as a pragmatic instrument for governance; the business sector relies on soft law to facilitate private enterprise; and civil society uses soft law as a vehicle for social change» (*ibid*.).

Soft law rules are devoid of a direct binding force. They «influence and restrict the will and freedom of their addressees», but «do not establish a real obligation or provide for a specific sanction. If one does not consider the sanction to be a necessary attribute of the rule, one can either recognize the instruments under consideration as sources of law, or, on account of their imperfect effectiveness, one can speak of 'atypical sources'» (Chiarelli 2019: 1).

In the light of this reconstruction, it seems that both the documentation offered by the UNESCO IOC and the documentation elaborated in the context of the Ocean decade 2020-2030, i.e. the *Roadmap for cooperation on the UN Decade of Ocean Science for Sustainable Development* (2021-2030) can be counted in the genus of *soft law*.

This is not denied even by comparison with the further indicators provided by the doctrine, which considers those sources of production, even international, by bodies, not necessarily the direct expression of state or territorial bodies (as is the case for the documents we have cited), whose rules are formulated according to a level of precison that is also decidedly soft (all the rules we refer to have a general programmatic content). These

15 https://unesdoc.unesco.org/ark:/48223/pf0000246931

16 https://oceanexpert.org/document/19966

are rules with a prescriptiveness relative to the group to which they belong that has forged them or adheres to them, and also with an often international or transnational effectiveness (a cardinal requirement of the provisions under consideration) (Bernardi 2015: 43).

The cogency of these norms, independent, as we have said, from the presence or absence of a sanction for their non-compliance, depends rather on the adherence of the individual State bodies to the international body that produces them.

The legality of the *soft-law* rule, therefore, is to be found in the degree of its effectiveness, i.e. in the «capacity of the rule to be shared and applied by its recipients» (Persio 2015: 2064).

The recognition of such a degree of cogency is not always unanimously agreed.

However, it is undeniable that *soft law* is today applied very widely in many areas of the *legal system*.

In this regard, as correctly pointed out by the doctrine, the "vehicle of entry" of international *soft law* sources is certainly the impact they have in the jurisdictional activity.

As emphasized by the doctrine «If one then accepts a concept of interpretation in such a broad sense as to embrace, in principle, the entire application phase of the criminal rules» or, if one prefers, the whole of the so-called "law in action" (Bernardi 2015: 44), it becomes even more evident that *soft law* sources may often have significant repercussions on the issues entrusted to the decision of the criminal court. For instance, they may contribute to the determination of the standards of diligence that exclude culpable liability on the part of the perpetrator, since – according to the prevailing thesis – the concept of 'disciplines' within the meaning of Art. 43 para. 1 of Italian Criminal Code includes rules issued by private authorities (Bernardi 2015: 45). Moreover, it deserves to be emphasized that even accepting the minority thesis according to which *soft law* sources are to be excluded from the concept of "discipline" does not in any way imply their irrelevance in the recognition of negligence; it simply shifts their relevance from the area of specific negligence to that of general negligence, given that the *soft law* rules of conduct could help to specify the parameters on the basis of which to assess whether or not there is negligence and/or imprudence of a criminal nature (Bernardi 2015: 44).

3. PROTECTING MARINE ECOSYSTEM THROUGH THE INSTRUMENTS OF CRIMINAL LAW

While man had to protect himself from the sea and its destructive potential since the dawn of civilization, less awareness of it has characterized the demands for its protection.

It is only recently that the sea has been the subject of in-depth reflection designed first to understand its potential in terms of wealth and development and then to appreciate its great value as a pivotal element of the ecosystem.

Reflection on the sea as the focus of a protection intended to safeguard its biological integrity is a recent achievement in our post-industrial age in which the economic interests of large groups have always shown greater persuasive force than the ecological conscience of citizens, which, however, is inexorably making its way, finding an audience even in international institutions.

The protection of the marine ecosystem both from the deregulated exploitation of its resources and from pervasive polluting phenomena presents traits of greater complexity than the protection of the sea as a risk factor for tsunamis, but nevertheless shares with it essential traits that insist on the profiles of the tendentially multi-individual face of the harm caused to the environmental matrix and the profound and complex ascendancy with international sources.

To give a more precise account of these aspects, it seems important to reconstruct briefly and without any claim to exhaustiveness the international discipline dedicated to the protection of the sea, and then to verify what instruments are offered by our national legislator, highlighting their limits and frictions with criminal law principles. Starting from the numerous criticalities proposed by the current system, we will approach the recent guidelines expressed by the EU Directive 2024/1203 especially with reference to the profile of the incrimination of ecocide and the potential it expresses.

3.1. A BRIEF OVERVIEW OF THE INTERNATIONAL REGULATORY FRAMEWORK OF MARINE PROTECTION

Sea and ocean have long been an unregulated environment. The application of the principle of the freedom of the seas, which reserved jurisdiction over a narrow strip of sea, limited to national coastlines, to individual states, soon

demonstrated its tragic limitations by significantly favoring a deregulation that was the precursor of the most famous and tragic accidents, such as that of the Liberian oil tanker Torrey Canyon which sank in 1967 off the coast of Cornwall, the Sea Star, which caught fire in 1972 in the Gulf of Oman, the Amoco Codiz, which was destroyed off the coast of Brittany in 1972, the Urquiola, which ran aground off the city of A Coruña in 1976, or the Exxon Valdes, which hit a reef in the Gulf of Alaska in 1989 (Rizzo Minelli 2024: 23).

The succession of such catastrophic events has allowed the development of an ecological conscience destined to translate into both the conclusion of international agreements and the strengthening of national legislation as a means of first safeguarding the marine environment.

In the international regulatory dimension, an important role must be acknowledged to conventional law and, in particular, to the *International Convention for the Prevention of Pollution of the Sea by Oil* (so-called Oilpol) adopted in London on 12 May 1954, which was the first to protect the marine ecosystem by introducing a ban on discharging residues of polluting operations from tank-washing in specific sea areas, for which the State of registration of the ship can also resort to the criminal instrument[17].

If a broader protection is granted by the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, of 29 December 1972[18], through which the contracting states intended not only to limit the dumping of wastes into the sea[19], but also to adopt the necessary measures to prevent marine pollution, the most significant step forward must be recognized in the *International Convention For The Prevention of Pollution from Ships*, later amended by the 1978 Protocol (so-called Marpol 1973/78)[20]. The Marpol Convention aims to «put an end to deliberate pollution of the marine environment» and likewise aims to prevent accidental or negligent pollution, extending the prohibitions to all «harmful substances» liable to endanger human health and harm the equilibrium of the marine ecosystem (Art. 2(2)).

17 Art. 4 obliges flag and coastal states to classify as an offence any violation of the Convention's rules concerning the discharge of substances into waters and to provide for appropriate and necessary proceedings against the offender.

18 It entered into force in August 1975 and was later supplemented by a subsequent Protocol in 1996.

19 These are those substances - other than those produced in normal ship operations - that are 'disposed of at sea, in the name of the express desire to bring all types of marine pollution caused by ships under international treaty regulations'.

20 The Convention was ratified by Italy by *Legge* no. 662 1980 and entered into force on 2 October 1983. On the Marpol Convention, *ex multis*, Griffin 1994: 489; van der Zwaag – Powers 2008: 423.

In pursuit of this objective, the Convention requires individual states to adopt, in their domestic legislation, «sanctions of such a nature as to discourage potential violators», which, although not necessarily criminal in nature, nevertheless constitute severe measures capable of deterring any violation of the Convention itself, while also favoring «the development of a common legal language for the entire world community».

The protection requirements introduced by the Marpol Convention were then taken up and developed by the *United Nations Convention on the Law of the Sea*, also known as the *Montego Bay Convention* of 1982, came into force on 16 November 1994[21], was the first to establish a legal order for the seas and oceans that favors international communications, peaceful uses of the seas, the equitable and efficient utilization of resources and the protection of the marine environment. The Convention provides a definition of «pollution of the marine environment» which is «the direct or indirect introduction by man of substances or energy into the marine environment, including estuaries, where it has or maỳ have harmful effects such as harm to living resources and marine fauna and flora, hazards to human health, interference with maritime activities, including fishing and other legitimate uses of the sea, deterioration of the qualitỳ of seawater due to its use, and degradation of approval values»[22].

Section VI of Part XII of the Convention, provides, in Arts. 213-228, the rules applicable in the case of marine pollution resulting from «land-based», «seabed», «from vessels», «from or through the atmosphere», and «by dumping» activities, also establishing that violation of the provisions may be punished by criminal sanctions by individual nation-states and dictating, in this regard, a detailed regulation on criminal jurisdiction designed to identify the State competent to hold the trial and the applicable criminal law[23].

21 Ratified in Italy by *Legge* no. 689 1994.

22 On the relevance of the convention, *ex plurimis*, Tephany 2019: 508 ff.

23 While the exercise of criminal jurisdiction for violations of the rules on ship-source pollution is generally the responsibility of the ship's flag State - since it is provided that when proceedings have been instituted by a State to punish an infringement, these are suspended from the time when the flag State has instituted proceedings for the same infringement within six months of the first being instituted (Art. 228(1)), which is also obliged to receive from the coastal State or the port State a complete file and a record of the proceedings – Art. 218 also confers on the State in whose port a vessel is located the duty to «receive from the coastal State or the port State a complete file and a record of the proceedings». Art. 228(1), which is also obliged to receive from the coastal State or the port State a complete file and the minutes of the trial – Art. 218 also empowers the State in whose port a vessel is located to «undertake investigations» and to «institute proceedings in respect of any discharge from that vessel outside the internal waters, territorial sea or exclusive economic zone of

In a nutshell, the Convention introduces a universal jurisdiction of the port state, as an exception to the principle of territoriality and jurisdiction of the flag state, which is close to the principle of universal jurisdiction and the mechanisms provided for *crimina iuris gentium*.

As for sanctions, these are left in concrete terms to national legislation, which must however ensure a deterrent effect with respect to the commission of criminal offences[24].

In conclusion, it is worth recalling how these Conventions of international scope are complemented by others aimed at protecting specific geographical areas, including the 1976 *Barcelona Convention for the Protection of the Mediterranean Sea* and the *Convention for the Protection of the Marine Environment of the North-East Atlantic*, signed in Paris in 1992 (Rizzo Minelli 2024: 24).

3.2. THE PROTECTION OFFERED IN THE FRAMEWORK OF THE EUROPEAN UNION

The brief excursus on the international face of the protection of the sea cannot omit a reference, albeit not exhaustive, to the discipline envisaged by the European Union in the protection of the sea from polluting agents that can upset its balance and integrity.

Here again, it should be noted that the EU regulations offer a safeguard mainly related to the harmful effects caused by ships, which are recognized as major sources of pollution.

The search for a regulatory apparatus designed to harmonize the legislation of member states, including through the introduction of effective criminal sanctions, has led to limit the analysis to more recent times, to the formulation of Directive 2009/123/EC, which states that «Under this Directive, illicit ship-source discharges of polluting substances should be regarded as a criminal offence as long as they have been committed with intent, recklessly or with serious negligence and result in deterioration in

that State in violation of applicable international rules and standards established through the competent international organisation or general diplomatic conference».

24 Of particular importance, because they relate to the type of penalty that may be imposed, are the provisions contained in Art. 230 of the UNCLOS, which provides that only pecuniary penalties may be imposed for infringements of pollution regulations committed by foreign ships beyond the territorial sea: if, however, such infringements have been committed in the territorial sea and a serious and deliberate act of pollution is involved, the psychological element of the offence must be taken into consideration in order to assess whether custodial penalties, in addition to pecuniary penalties, should be imposed.

the quality of water. Less serious cases of illicit ship-source discharges of polluting substances that do not cause deterioration in the quality of water need not be regarded as criminal offences. Under this Directive such discharges should be referred to as minor cases» (Considerando 9).

Art. 4 punish the author of any type of discharge, even if it is 'minor', while Art. 5 maintains the system of exceptions already regulated by the repealed decision, thus excluding the punishment of those who discharge pollutants into marine waters in order to comply with the requirements of the Marpol Convention.

Directive 2009/123/EC also provides for the liability of legal persons, which is necessary related to two conditions: that the conduct must have been committed by a person who holds powers of representation, decision-making or control (para. 1) or that the author is subject to the authority of the latter (para. 2). The polluting harm must fall within the types of conduct peremptorily provided by the Directive and must be carried out for Legal Person's benefit.

While the 2009 Directive represents a tool for the protection of those factors that have the greatest impact on the integrity of the marine ecosystem, it should nevertheless be pointed out that the European Union legislator had already previously been concerned to safeguard, by means of criminal law instruments, the environmental matrices that are potentially harmful.

Directive 99/2008/EC establish that it «obliges Member States to provide for criminal penalties in their national legislation in respect of serious infringements of provisions of Community law on the protection of the environment. This Directive creates no obligations regarding the application of such penalties, or any other available system of law enforcement, in individual cases» (Considerando 10).

The provisions of the Directive present profiles of great interest in the economy of this reflection since they expressly involve «waters» among the objects of the protection offered.

Thus, Considerando 5 already states that «effective protection of the environment, there is a particular need for more dissuasive penalties for environmentally harmful activities, which typically cause or are likely to cause substantial damage to the air, including the stratosphere, to soil, water, animals or plants, including to the conservation of species».

One is immediately entitled to assume that the generic indication «water» can also refer to marine waters, in view of the scope of Annex A,

which, among the list of Community legislation adopted on the basis of the EC Treaty, the infringement of which constitutes an infringement within the meaning of Art. 2(a)(i) of the directive, includes not only Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water (4), Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, and Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality.

The express mention of these areas of protection authorizes us to consider that the scope of Directive 99/2008/EC also extends to marine waters whose integrity, also in terms of safeguarding flora and fauna, is protected by the obligations of incrimination provided for natural persons and legal entities that endanger or cause damage to the environment by conduct supported by intention or negligence.

The set of safeguards imposed by the Directive represented a turning point in the protection of environmental matrices entrusted to a penal instrument whose effectiveness has often proved to be inefficient in terms of both general prevention and special prevention.

In particular, the prescribed incriminations have resulted in provisions that are particularly no compliant with criminal law principles.

In order to understand this regulatory *aporia*, we briefly dwell on the Italian legal framework devoted to protecting water ecosystems through criminal law.

3.3. MARINE SAFEGUARDING IN ITALIAN CRIMINAL LEGISLATION

The regulation of water protection in our legal system shows a complex face that is inevitably affected by the choices made by our legislator in the various *bodies* of legislation designed to provide criminal protection against endangering or damaging the environment.

The two approaches, made by *Decreto Legislativo* no. 152 of 2006 and Title VI bis of the Criminal Code both present considerable peculiarities concerning the incrimination technique chosen, the relationship with the administrative paradigm of reference and the compliance with the principles of criminal law.

In fact, the protection of marine waters is provided for primarily in Part Three, under the heading «Rules on soil protection and combating desertification, protection of waters against pollution and management of

water resources», and in particular in Section I, under the heading «Rules on soil protection and combating desertification», Title I, «General principles and competences» of *Decreto Legislativo* no. 152 2006.

Art. 53 of Chapter I identifies the object of protection in the «hydrogeological restoration of the territory» in which the water element must also be identified, in accordance with Art. 54, with «coastal waters», i.e. with «the surface waters situated inland with respect to an imaginary straight line distant at each point one nautical mile on the external side from the nearest point of the base line that serves as a reference for defining the limit of the territorial waters, and which extend, where appropriate, to the external limit of the transitional waters».

Coastal waters are also referred to in Art. 54(1)(l), which includes «coastal waters» in the notion of «surface water body».

Section II, headed «Protection of Waters against Pollution», in Title I «General Principles and Powers», in Art. 73, in identifying the Purposes of Protection includes:

Para. 1(a)(1) «the function of preventing and reducing pollution and implementing the redress of polluted bodies of water»;

Para. 1(e)(3) «to protect territorial and marine waters and to achieve the objectives of relevant international agreements, including those which aim to prevent and eliminate pollution of the marine environment, with the aim of ceasing or phasing out discharges, emissions and losses of priority hazardous substances with the ultimate aim of achieving concentrations in the marine environment near background values for naturally occurring substances and close to zero for anthropogenic synthetic substances».

These objectives are also pursued through:

Para. 2(g) «the adoption of measures for the gradual reduction of discharges of emissions and any other source of diffuse pollution containing hazardous substances or for the gradual elimination of such discharges where they contain priority hazardous substances, contributing to the achievement in the marine environment of concentrations close to natural background values for naturally occurring substances and close to zero for anthropogenic synthetic substances»,

Para. 2(h) «the adoption of measures to control discharges and emissions into surface waters according to a combined approach».

Also in this case, Art. 74(1)(c) identifies among the objects of protection as «coastal waters: surface waters lying inland from an imaginary straight line distant at each point one nautical mile on the outer side from

the nearest point of the baseline serving as a reference for defining the limit of territorial waters and extending, where appropriate, to the outer limit of transitional waters»[25]

The integrity of marine water resources is criminally protected from polluting discharges, as provided for in Art. 137 which sanctions «whoever opens or in any case carries out new discharges of industrial waste water without authorization, or continues to carry out or maintain such discharges after the authorization has been suspended or revoked, shall be punished with imprisonment from two months to two years or with a fine ranging from one thousand five hundred euro to ten thousand euro», a penalty that is increased (para. 2) «when the conduct described in paragraph 1 concerns discharges of industrial waste water containing dangerous substances included in the families and groups of substances indicated in the tables» of Annex A.

The prescription also provides for harsher penalties for «anyone who violates the requirements concerning the installation and operation of automatic controls or the obligation to keep the results of such controls as set out in Art. 131» as well as for «the operator of urban wastewater treatment plants who exceeds the limit values when discharging».

The regulation also provides for criminal protection against non-compliance with measures taken by the competent authorities.

Also of great interest is para. 13 of the same norm, which provides that «the penalty of imprisonment from two months to two years shall apply if the discharge into the waters of the sea by ships or aircraft contains substances or materials for which an absolute prohibition of spillage is imposed pursuant to the provisions contained in the international conventions in force and ratified by Italy, unless they are in such quantities as to be rendered rapidly harmless by the physical, chemical and biological processes occurring naturally in the sea and provided that prior authorization is obtained from the competent authority».

The effort to give environmental regulation a solid architecture capable of bearing the weight of the complex protection requirements poses

25 Art. 83. Bathing waters «1. Bathing waters must meet the requirements of *Decreto del Presidente della Repubblica no. 470 1982*. 2. For the waters that are still not suitable for bathing according to the decree mentioned in paragraph 1, the regions shall communicate to the Ministry for the Environment and the Protection of the Land and Sea, by the beginning of the bathing season following the date of the entry into force of part three of this decree and, subsequently, on an annual basis before the beginning of the bathing season, all the information relative to the causes of the non-bathing and the measures they intend to adopt, according to the methods indicated in the decree mentioned in article 75, paragraph 1».

critical problems of compatibility with the inalienable principles that reinforce criminal prosecution.

The first and most evident contrast takes place on legality and involves the chosen protection technique, which appears, on the one hand, entrusted to an indeterminate regulatory formulation structured on the reference to secondary sources such as authorizations or threshold limits, indicated by regulatory sources or administrative acts[26].

The *Decreto Legislativo* no. 152 2006 is structured in a complex of cases «constructed as (more or less) sanctioning appendices» to «administrative precepts and procedures" that express a veritable "sanctioning function of criminal law with respect to administrative law»[27].

In the *Decreto Legislativo* no. 152 2006, in fact, specific cases coexist with others of a distinctly open nature. Such dissimilarity does not prevent, however, that in all these precepts a detachment from the event is consummated, due to precise choices of protection.

But not only that: the choice of entrusting the perimeter of the lawfulness of conduct to secondary regulatory or administrative acts also profoundly influences the criminal court's decisions (Gargani 2020b: 114).

In fact, administrative discipline represents the 'logical *prius*' of environmental offences and it is entrusted with the «definition and delimitation of the object of protection as well as the identification of the boundary between licit and illicit» (Gargani 2020b: 112).

Administrative determinations constitute rules of conduct that guide the citizen's behavior and rules of judgement for the judge called upon to review their actions (Ramacci 2021: 316 ff.). For the criminal law of the environment to respect the criteria of certainty and *predeterminability* of the consequences of unlawful action it is necessary that the above rules coincide (Palazzo 1999: 548).

But in reality, this is not the case. Criminal environmental law manifests a certain degree of "uncertainty and unpredictability" that depends on the level of *ancillarity* reserved for administrative law and the correlated significance of the judge's review of the legitimacy of the administrative measure itself[28].

26 As pointed out by Gargani 2020b: 112 and in the same sense already Pedrazzi 1991: 619. Structural profiles that also affect the knowability of the precept, as pointed out by Rotolo 2018: 183 ff.

27 Thus Ruga Riva 2021: 15. This is also underlined by Giunta 2002: 852 ff.

28 Gargani 2020b: 117. For these aspects see also Silva 2014: 21 ff. On the relationship between criminal judge and public administration, see: Gambardella 2002: 276 ff. and Palazzo 2012: 1610 ff.

In the context of the offences provided for by the *Decreto Legislativo* no. 152 2006, criminal law performs a «sanctioning and accessory function with respect to the governance of the environment» reserved to the administrative authority, which exercises it by means of authorization provisions that can identify lawful risk thresholds (Giunta 2008: 1152), with a consequent emptying out of criminal jurisdiction.

Criminal protection is a protection of «administrative functions», focusing merely on the «administrative control of risky activities»[29].

This choice of "dependence and ancillary nature" should not be assessed in an a priori negative way since, precisely in these cases and for the purposes that concern us here, the judge exercises a limited discretion, bound to the violation of administrative statutes (Gargani 2020b: 119). Here the precept is more determined, and the citizen can better direct his behavior according to the established rules.

The framework of profound tension of environmental offences with the principle of legality is aggravated by the friction that also takes place with offensiveness.

Any consideration in this sense must be preceded by an acknowledgement of the unresolved identification of the legal right protected by the rules. If for some, in fact, the provisions have as their object the protection of the environment in itself, for others, on the other hand, environment would be protected instrumentally to human life and health or other interests (De Santis 2012: 21 ff.).

If in *Decreto Legislativo* no. 152 2006 the protection of human health seems to prevail, in Italian Criminal Code, the protection of the environment as an autonomous legal asset has been deemed prevalent[30].

However, regardless of the theses chosen, one aspect is scarcely refutable: this is the 'liquidity and incommensurability in space and time of the forms of offence' against the environment, which is bound to affect the structure of the incriminating offences[31].

The provisions of the *Decreto Legislativo* no. 152 2006 appear, in this sense, paradigmatic. The legislator here does not choose a uniform

29 Gargani 2020b: 118. On this ancillarity: Di Landro 2018: 116.

30 De Santis 2017: 189 ff. and Id. 2012: 21 ff. For a broader perspective of the debate see Amérigo - Aragonés – Frutos 2007: 98; González - Amérigo 1999: 14-15; Valdivielso 2005: 192. Also of great interest are the reflections of Bustos Ramírez 1991, 260.

31 Gargani 2020b: 129. It highlights equally relevant issues in the context of Spanish criminal law Ochoa Figueroa 2014: 255.

environmental protection strategy in advance, but leaves this to the identification, on a case-by-case basis, of the object of protection.

The elusiveness of the legal asset is reflected in a complex of contraventions constructed as criminal behavioral models that, favoring forms of anticipation of protection, take the form of abstract danger offences[32] intended to repress conduct that might not actually be offensive to the legal asset (Ruga Riva 2019, 16).

In its eagerness to overcome the strong criticalities highlighted, the legislature introduced Title VI bis into the corpus of the Criminal Code with *Legge* no. 68 2015.

Some of the provisions of this legislation also act as a potentially valuable safeguard for the marine ecosystem.

This concerns, in particular, the case of environmental pollution, Art. 452 *bis* Cr.C., which punishes with severe penalties anyone who, inter alia, «unlawfully causes a significant and measurable impairment or deterioration» of «waters» and in any case of an «ecosystem», which may well be the marine one. Where marine pollution causes, as an unintended consequence of the offender,

«Personal injury, except in cases where the illness lasts no more than twenty days, serious injury, very serious injury or death», the penalty is significantly increased under Art. 452 *ter*, which punishes «death or injury as a consequence of the crime of environmental pollution»[33].

When the damage of the marine ecosystem became of particular gravity and diffusion, the legislator, in order to pay full respect to Directive 99/2008/EC, provides, in Art. 452 *quater* Cr.C. the crime of Environmental Disaster.

The penalty of imprisonment from 5 to 15 years is in fact foreseen for anyone who causes «1) the irreversible alteration of the equilibrium of an ecosystem; 2) the alteration of the equilibrium of an ecosystem whose elimination is particularly onerous and achievable only with exceptional measures; 3) the offence to public safety by reason of the importance of the fact for the extension of the impairment or its damaging effects or for the number of persons offended or exposed to danger».

32 Contieri 2018: 29. On abstract danger, in a critical sense, M. Gallo 1969: 1 ff.; for an initial reassessment then consolidated G. Fiandaca 1977: 184 ff.; in a monographic vein Parodi Giusino 1990; for a reconstruction of the picture Canestrari 1991: 1 ff. and Angioni 1994: 97 ss.; in a hermeneutic reconversion of the abstract into the concrete Catenacci 2006: 1415 ff.; more recently D'Alessandro 2012.

33 In the case of death of more than one person, injury to more than one person, or death of one or more persons and injury to one or more persons, the punishment to be imposed for the most serious case, increased by up to three times, shall apply, but the term of imprisonment may not exceed twenty years).

Here again, the regulatory plot reveals an unequivocal failure of any attempt to protect the marine ecosystem in a manner obsequious to the principles of criminal law (Padovani 2015: 10 ff.).

The case of environmental disaster, in particular[34], presents aspects of profound indeterminateness that are rooted in the chosen linguistic formulation, which does not allow the possibility to really distinguish it from the environmental pollution[35].

The typicity is focused on a clause of special illegality, which is identified with the abusiveness of the conduct, coinciding with its contrariety to administrative paradigms aimed at regulating aspects of balance between the protected rights (Giunta 1997: 1107). It entails that the framework of lawfulness, i.e. the boundary of lawful risk, has already been identified by the administrative authority, and this should be sufficient to preclude a meaningful review by the judge.

But this is not the case, since judicial practice shows a continuous and pervasive intrusion of decisional power into the field of administrative discretion that should remain outside it.

And even worse appears to be the situation when we reflect on the compliance with the principle of offensiveness[36].

The case of Art. 452 *quarter* Cr.C. does not allow for a proper procedural ascertainment of the offence, with the result that the main effect of the repressive action is concentrated in the precautionary stage, the natural venue for ascertaining the 'fumus' (Gargani 2018: 25).

From this point of view, the offence devoted to punishing the crimes of negligent pollution and environmental or for danger also presents considerable criticalities. Art. 452 *quinquies* of the Cr.C., let us recall, provides that «If any of the facts referred to in articles 452 *bis* and 452 *quater* are committed through negligence, the penalties provided for in the same articles shall be reduced by between one third and two thirds».

It also provides that «if the danger of environmental pollution or environmental disaster arises from the commission of the acts referred to in the preceding paragraph, the penalties shall be further reduced by one third».

34 On critical issues, *ex multis*: Ruga Riva 2016: 4635 ff.; Cornacchia 2018: 102 ff.; Pisani 2018: 112 ff.; Accinni 2018: 130 ff.

35 These are considerations by De Santis 2012: 21 ff. In the same sense Gargani 2018, 22; Id. 2020a, 10. In the same sense Amoroso 2018: 2953 ss.; Riccardi 2018: 319 ff. Less critical Ruga Riva 2019: 98.

36 On the reform D'Alessandro 2016: 83 ff.

The two subparagraphs deserve separate considerations. The first, in deference to the rank accorded to the legal asset of the environment, protects it from negligent aggression. The second, on the other hand, rises to a crime nothing less than a 'case of... danger of danger'[37]!

Aiming at guaranteeing a strong protection of the environment, has been created a rule with narrow margins of applicability since it represses the *danger of endangering* public safety, in clear contrast with the principle of offensiveness[38].

The case of intentional and negligent environmental disaster also presents, as the doctrine emphasizes, a contrast with the subjective elements of the offence (*mens rea*) due to the «complex 'genealogy' of the positions of guarantee» that leads to a «difficulty in personalizing the judgement of culpability» (Gargani 2018: 25).

The stratification of different levels of offence functional to the production of an event, especially a disaster, implies the physiological co-presence of several positions of guarantee, the contribution of which appears teleologically bound up in the figure of a «*macro* unitary conduct» (Gargani 2018: 26) capable of overwhelming the fragile boundaries of the authentically personal ascription of criminal liability.

4. INTERNATIONAL PROTECTION OF THE MARINE ECOSYSTEM: THE CRIME OF ECOCIDE AND THE YEARNING FOR JURISDICTION BY THE INTERNATIONAL CRIMINAL COURT

The dysfunctional response to the protection against the macro-events that characterize the impairment of environmental matrices, including marine waters, is, on closer inspection, a international phenomenon, given the very extraterritorial nature of the asset.

A shining example of this is the international debate on the appropriateness of introducing the crime of ecocide into the *corpus* of crimes subject to the jurisdiction of the International Criminal Court.

The reasons are to be found in the peculiar characteristics that are identified not only in the imbalance of powers between the actors involved, but also in the plurality of actors, both on the offenders and victim's side.

37 In a critical sense Ruga Riva 2019: 110 ff.

38 Bell - Valsecchi: 76. In a critical sense also Gargani 2020c, 6.

From the first point of view, it is well known that many of the accidents that have a serious impact on natural and environmental resources are caused by companies operating in developing Countries which, driven by the pressing need to attract investment at any cost, do not exercise the appropriate controls[39].

To address this serious imbalance and to ensure uniform rules, it has been proposed that crimes against the environment, committed by particularly important industrial entities, should be given a new area of intervention within international criminal law, due to the existence of an «asymmetry between the ability of the judicial systems of many countries to judge them and the ability of multinational corporations to avoid any kind of effective control» (Nieto Martín 2012: 138).

The option for international criminal law would also be justified by the cross-border nature of these incidents, which often involve two or more states, or even extend to areas outside the jurisdiction of individual Countries, making greater cooperation of the international legal community indispensable (ONU 2019).

Under the second and related profile the protection of the environment from peculiarly significant and destructive events represents a phenomenon which, on the offender side, is distinguished by the involvement of complex structures, corporate or political ones, which evoke multi-individual decision-making mechanisms. On the passive side, likewise, the affected subjects, the victims, often an undefined, poorly identifiable group, at least *ex ante*, represents a circumstance which, like the previous one, calls for serious reflection on the capacity of today's (and future) criminal law instruments to offer adequate answers and, above all, to guarantee respect for general principles whose effectiveness must in any case be defended.

The major disasters that have occurred in marine environments confirm this picture.

It is sufficient to draw attention to the dynamics, consequences and persons involved in the Prestige accident that occurred on 13 November 2002 off the coast of Galicia.

Reasons related to the high value of the oil cargo the ship was carrying were behind the cargo's owner's prolonged resistance to recovery

39 González Hernández 2023: 82. Also of absolute interest is Górriz Royo 2019: 1 ff. On the relationship between legal person liability and environmental crime, for all, in the Italian literature: Scarcella 2021: 561 ff.

procedures by the Spanish Coast Guard[40] which, together with the lack of cogency of the measures taken by the Spanish authorities, led to the sinking of the ship a few days later.

The spillage of fuel from the leak in the ship resulted in a very serious damage not only to the marine and coastal ecosystem but also to the economy of the Spanish fishing region.

It was only thanks to a complex and costly salvage operation and the efforts of numerous volunteers that the Galician coast was restored to its integrity with singular speed, only to suffer further consequences years later due to the tides that allowed fuel deposited on the seabed to resurface.

The case of the oil tanker Prestige appears emblematic of the permanent exposure of the marine environment to pollution risks that do not appear to be entirely containable even by virtue of compliance with vessel safety regulations that have been implemented over the years, including at the European Union level (Ship Structure committee 2018: 8).

The desire for international protection, as we have tried to point out, has ancient origins.

Already the United Nations General Assembly, with Resolution 177(II) of 21 November 1947, had instructed the United Nations Commission on International Law (CDI) to prepare a draft code on crimes against peace and the security of mankind. In its long gestation, this project saw only in 1986 the first attempt to overcome the classic tripartition of the categories of crimes over which the International Military Tribunal at Nuremberg had jurisdiction: crimes against peace, war crimes and crimes against humanity (Arenal Lora 2022).

However, we have to wait until 1991 to read the first proposal to introduce an autonomous offence of ecocide. Art. 26 of the *Draft Code* provided that «Whoever intentionally causes extensive, lasting and serious damage to the natural environment, or orders such damage to be caused, shall, upon conviction, be sentenced» (ILC 1991: 107).

The offence would apply in both times of war and peace, when the prohibited act reverses itself into an «attack on the natural environment» and when the damage is «extensive, lasting and serious as well as intentional»[41].

40 Price for towing (estimated by the *Tribunal Marítimo Central Español* for this type of case between 10 and 30% of the value of the ship and its cargo).

41 Clearly borrowing its wording from Art. 55 of the Additional Protocol I to the Geneva Conventions of 1949.

Even in the hypothesis of its first introduction, the proposal raised doubts even among its authors, who were aware of the difficulty of finding the convergence among States necessary to support the influence of the offence.

Not only that, but the solution envisaged by Art. 26 had shown certain limits linked to the persistence of a firm anthropocentric approach (the application of the case remains linked to cases in which serious damage to the natural environment would have damaged man's vital interests) and to the limitation of protection to only the willful face of the conduct. This circumstance excludes the wide range of damage resulting from negligent, imprudent or impervious environmental protection that is the constant feature of a very broad phenomenology of environmental damage.

Another significant limitation stemmed from the exclusion from the object of protection of those damages arising from the "normal" activities of industrial companies, a concept that was poorly determined and thus a harbinger of interpretations with largely lax repercussions (ILC 1991: 50-53).

The critical points just highlighted led to the exclusion of crimes against the environment from the 1996 *Draft Code of Crimes against Peace and Human Security*[42].

However, the only reference remained in Art. 20(g) on war crimes, which proposed to criminalize: «the use of methods or means of warfare not justified by military necessity, with the aim of causing widespread, long-term and serious damage to the natural environment, thereby endangering the health or survival of the population, when such damage occurs» (Arenal Lora 2022: 14).

Thus, the Rome Statute of the International Criminal Court, adopted in 1998, modelled on the 1996 *Draft*, limited its jurisdiction to the crime of aggression, the crime of genocide, crimes against humanity and war crimes (Catenacci 2003). It follows that crimes against the environment remain imprisoned within the latter category, and in particular in Art. 8.2.b.iv), which identifies it as: «Intentionally launching an attack knowing that it will cause accidental loss of life, injury to civilians or damage to civilian objects, or extensive, long-term and serious damage to the natural environment that would be manifestly excessive in relation to the concrete and direct overall military damage intended».

Despite the programmatic efforts also expressed by the Office of the Prosecutor of the Court in the *Policy Paper on Case Selection and Pri-*

42 The genesis of the International Criminal Court is traced by Costi – Fronza 2020: 13 ff.

oritisation (ICC Office of the Prosecutor, 2016) which reiterated the will to support a more comprehensive effort to combat crimes involving the «destruction of the environment, exploitation of natural resources» and «unlawful expropriation» the destruction of the environment as a war crime has had very limited application in the jurisprudence of the Court (Pereira 2020: 218).

The persistence of such a significant gap in protection has led to a renewed proposal to introduce the crime of ecocide as an autonomous criminal offence in the Rome Statute (Baker 2021), defined by the *Expert Panel* of the *Stop Ecocide Foundation*[43] as «intentional unlawful acts committed with knowledge of the substantial likelihood that such acts will cause serious, widespread or long-term damage to the environment».

In particular, the proposal provides for an Art. 8b, which, in point (a), defines «intentional» as an act committed with «reckless disregard for a harm that would be clearly excessive in relation to the anticipated social and economic benefits», while in point (b), it clarifies that «serious» is «harm that results in very serious adverse changes, disruption or damage to any element of the environment». Again, subpara. (c) of the same article, specifies that «widespread» is «damage that extends beyond a limited geographical area or that is suffered by an entire ecosystem or species or by a large number of human beings». While subsection (d) specifies that «long-term» is «damage that is irreversible or cannot be remedied through natural recovery within a reasonable period of time», subsection (e) defines the environment as «the earth, its biosphere, cryosphere, lithosphere, hydrosphere and atmosphere, as well as outer space».

The offence of ecocide provides for a twofold limit of typicity about the prohibited conduct: «there must be a substantial likelihood that the conduct will cause serious and widespread or long-term damage to the environment»; furthermore, the prohibited acts must be illegal or intentional.

It follows that, «the prosecution must demonstrate a substantial likelihood of causing serious and widespread or long-term harm through illegal or intentional acts or omissions».

The decision to support the introduction of ecocide as a fifth autonomous crime subject to the jurisdiction of the International Criminal

43 The documents and definition prepared by the independent panel of experts invited by the Stop Ecocide Fundation in 2021 are available at https://www.stopecocide.earth/legal-definition . The quotes are excerpted from those internet pages.

Court shows serious critical aspects, which could undermine its practical feasibility[44].

As the doctrine rightly points out, precisely with reference to the legal asset, «the environment creates peculiar challenges for its protection that are not necessarily the same as in other areas of IPR» (Arenal Lora 2022: 14).

First of all, there is a difficulty in identifying the illegal conduct, since the damage may be caused by conduct that is both contrary to and obedient to administrative provisions intended to regulate the environment.

In spite of the defining efforts, we face an uncertain notion of environment and even more so of ecosystem which violates principle of legal certainty[45].

Not only that, but the nature of the damage[46] and its diffusion do not allow the precise identification of the offender to whom the causally relevant conduct must be ascribed.

There is the diachronic perspective in which the damage lives and develops, which is the harbinger of macro-position of guarantee in contrast to the principle of culpability (De la Cuesta 2017: 7).

Not less problems can be faced within the jurisdiction of the International Criminal Court[47].

Moreover, any amendment of the Treaty of Rome would require an amendment under Arts. 121 and 122 that would only be relevant for those states parties that have ratified it[48]. Similarly, Art. 25 of the Treaty limits the jurisdiction of the International Criminal Court to natural persons, which would prevent the prosecution of what empirical data suggests are the main authors of ecosystem-destroying conduct, namely legal persons and states (Olasolo – Galain Palermo 2018: 81).

44 Many of which are highlighted in Carlizzi et alii 2003.

45 Arenal Lora 2022: 18. The problematic profiles of the discipline are addressed by Clifford - Edwards, 2012.

46 He speaks of cumulative effects with reference to environmental damage: Gargani 2016: 4.

47 From the perspective of the revision of the instrument, amendments may be proposed, adopted and ratified in accordance with Arts. 121 and 122 of the Statute. Although any State may propose an amendment, it must be adopted by a two-thirds vote of the Assembly of States Parties or at a Statute Review Conference. Amendments shall enter into force for all States Parties one year after ratification by 7/8 of the States Parties. However, amendments to Arts. 5, 6, 7 and 8 - which concern the scope of the Statute and the definition of crimes - will only enter into force for States Parties that have ratified the amendment.

48 On critical profiles see Lattanzi - Monetti 2006.

These critical issues, combined with a lack of political will, result in the persistence of resistance that has not been overcome to date in the process of including ecocide within the jurisdiction of the International Criminal Court (Ciampi 2015: 153).

5. THE EUROPEAN UNION'S RESPONSE TO THE NEED FOR WIDESPREAD PROTECTION OF THE MARINE ECOSYSTEM: EU DIRECTIVE 2024/1203

The obstacles that reform proposals cyclically come up against suggest the goodness of the alternatives.

The first is certainly the one undertaken by Directive (EU) 2024/1203, which pursues a homogeneous protection in the territory of the European Union against the most serious and widespread forms of endangering and damaging the ecosystem and natural habitat.

It is, in truth, a spatially limited response, unsuitable for striking at the real sources of the pollution that today are inscribed in the predatory policies of a few countries certainly not located in the territory of the European Union.

The punishment of ecocide as an expression of a Union legislative policy takes on a symbolic value that goes beyond the normative translation of the European Union prescription and, above all, involves if not States, at least legal persons, recognized rightly or wrongly as the protagonists not only of the dysfunctional factors that create the most serious pollution phenomena but, above all, as those on whom we must rely for the implementation of policies with a greater virtuous impact on the environment.

Thus, to provide more cogent protection for the ecosystem, EU Directive 2024/1203 in Considerando 21 affirms:

> «Criminal offences relating to intentional conduct listed in this Directive can lead to catastrophic results, such as widespread pollution, industrial accidents with severe effects on the environment or large-scale forest fires. Where such offences cause the destruction of, or widespread and substantial damage which is either irreversible or long-lasting to, an ecosystem of considerable size or environmental value or a habitat within a protected site, or cause widespread and substantial damage which is either irreversible or long-lasting to the quality of air, soil, or water, such offences, leading to such catastrophic results, should constitute qualified criminal offences and, conse-

> quently, be punished with more severe penalties than those applicable in the event of other criminal offences defined in this Directive. Those qualified criminal offences can encompass conduct comparable to 'ecocide', which is already covered by the law of certain Member States and which is being discussed in international fora»

The notion of *ecocide* is therefore linked to a quantitative and diffuse dimension of impairment that must be interpreted in the light of Considerando 13, which recognizes that:

> «Some criminal offences defined in this Directive include a qualitative threshold for the conduct to constitute a criminal offence, namely that such conduct causes the death of, or serious injury to, a person or substantial damage to the quality of air, water or soil, or to an ecosystem, animals or plants. In order to protect the environment to the fullest extent possible, that qualitative threshold should be understood in a broad sense including, where relevant, substantial damage to fauna and flora, habitats, to services provided by natural resources and by ecosystems as well as to ecosystem functions».

Transposed into the enactment of the Directive, the indications of Considerando 13 and 21 take the form of Art. 3(3), which provides that the conduct referred to in Art. 3(2) constitutes a 'qualified' offence when it causes:

«(a) the destruction of, or widespread and substantial damage which is either irreversible or long-lasting to, an ecosystem of considerable size or environmental value or a habitat within a protected site, or

(b) widespread and substantial damage which is either irreversible or long-lasting to the quality of air, soil or water»

It is precisely the letter of the Directive that comforts us on the possibility of considering the marine environment as the primary object of protection, a circumstance reinforced by the conduct indicated in Art. 3(2) which, in their multiple declinations, do not forget to place «waters» at the center of protection.

The marine ecosystem is at the heart of many of the basic offences whose incrimination is provided by the Directive.

Thus, in a perspective that seeks with difficulty to reconcile aspects of anthropocentrism and ecocentrism, the Member States «shall ensure that the following conduct constitutes a criminal offence where it is unlawful and intentional» and in particular where «the death of, or serious injury to, any person or substantial damage to the quality of air, soil or water, or substantial damage to an ecosystem, animals or plants» is caused or may

be caused by the «the discharge, emission or introduction of a quantity of materials or substances, energy or ionizing radiation, into air, soil or water» (Art. 3, para. 2(a)), «the placing on the market, in breach of a prohibition or another requirement aimed at protecting the environment, of a product the use of which on a larger scale, namely the use of the product by several users, regardless of their number, results in the discharge, emission or introduction of a quantity of materials or substances, energy or ionizing radiation into air, soil or water» (Art. 3, para. 2(b)), «the manufacture, placing or making available on the market, export or use of substances, whether on their own, in mixtures or in articles, including their incorporation into articles», (Art. 3, para. 2(c)), by «the manufacture, use, storage, import or export of mercury, mercury compounds, mixtures of mercury, and mercury-added products where such conduct is not in compliance with the requirements set out in Regulation (EU) 2017/852 of the European Parliament and of the Council» (Art. 3, para. (d)), «the operation or closure of an installation in which a dangerous activity is carried out or in which dangerous substances or mixtures are stored or used, where such conduct and such dangerous activity, substance or mixture fall within the scope of Directive 2012/18/EU of the European Parliament and of the Council (27) or of Directive 2010/75/EU of the European Parliament and of the Council» (Art. 3, para. 2(j)), «the construction, operation and dismantling of an installation, where such conduct and such an installation fall within the scope of Directive 2013/30/EU of the European Parliament and of the Council» (Art. 3, para. 2(k)), or «the manufacture, production, processing, handling, use, holding, storage, transport, import, export or disposal of radioactive material or radioactive substances, where such conduct and such a material or substances fall within the scope of Council Directives 2013/59/Euratom, 2014/87/Euratom or 2013/51/Euratom» (Art. 3, para. 2(l))[49].

A more specific focus on the protection of the marine ecosystem is instead ensured by the mandatory incrimination of the «the recycling of ships falling within the scope of Regulation (EU) No 1257/2013, where such conduct is not in compliance with the requirements referred to in Art. 6(2), point (a), of that Regulation» (Art. 3, para. 2(h)) and the «the ship-source discharge of polluting substances falling within the scope of Art.

49 An exquisitely ecocentric profile can be found in the provision of Art. 3(2)(e), which provides that 'the carrying out of projects within the meaning of Art. 1(2)(a), as referred to in Art. 4(1) and (2) of Directive 2011/92/EU of the European Parliament and of the Council (24), if such conduct is carried out without authorisation and causes or is likely to cause significant damage to the quality of the air or soil or to the quality or status of water, or to an ecosystem, fauna or flora'.

3 of Directive 2005/35/EC into any area referred to in Art. 3(1) of that Directive, except where such ship-source discharge satisfies the conditions for exceptions set out in Art. 5 of that Directive, which causes or is likely to cause deterioration in the quality of water or damage to the marine environment» (Art. 3, para. 2(i)).

The Directive shows particular attention to the protection of the environment and, in particular, of the marine environment, but it does not escape from some criticism, which focuses on two aspects in particular.

The first lies in the drafting, which does not seem to guarantee the strict typicality propaedeutic to a national legislations, truly obsequious to the paradigms required by criminal orthodoxy.

The second relates to the absence, in the crime of ecocide, of indicators capable of constituting a real discretional profile with the basic hypotheses, at least from the point of view of typicality.

Subpara. (a) of Art. 3(3), in fact, entrusts its face of greater severity to the following criteria: destruction of an ecosystem of considerable size or environmental value or of a habitat within a protected site or widespread and significant, irreversible or lasting damage to that ecosystem or habitat, while subpara. (b) speaks of widespread and significant, irreversible or lasting damage to the quality of the air, soil or water.

But if, as mentioned, most of the basic cases already present the relevant harm as a typifying feature, so it cannot be considered a discretional standard capable of giving ecocide a distinctive face.

Let us see, then, whether the other criteria set out in para. 3 can be conferred a qualifying value in terms of importance such as to justify a criminal offence with a peculiar face and, above all, with a different and superior punitive treatment.

A negative answer seems also to be given with reference to the notion «lasting» since under para. (6) an injury is relevant on the basis of its duration (Art. 6(1)(b) refers to «the duration of the injury (long, medium or short)»).

The benefit of the doubt may instead be given to the other two criteria of the *extent* and *irreversibility* of the harm. Here too, para. (6) provides that the profiles to which reference must be made in the basic case in order to qualify the harm as significant include its «extent» (Art. 3(6)(c)) and «reversibility» (Art. 3(6)(d)).

Relevant will therefore be, first and foremost, damage of a certain 'extent', a concept that an *interpretatio abrogans* of the offence of ecocide

could well overlay on the notion of 'widespread' damage required by the same, thus dissipating its distinctive feature.

More arguments can instead be made in favor of the *reversibility* of the damage. Here a more justifiable attempt to avert an original ineffectiveness of the provision suggests that the basic hypothesis in which the damage is reversible but not without difficulty should be considered relevant and that the damage that proves to be irreversible should be entrusted to the typicality of ecocide.

A more effective discretionary value may instead be conferred on the requirements of «an ecosystem of considerable size or environmental value» or «a habitat within a protected site» whose destruction is to be caused.

The profile of the spatial extent of the environmental matrix and its destruction represents, with the only possible exception of the conduct provided for in para. 3 lett. n), which already penalizes as a basic hypothesis the destruction of certain animal or plant species, the truly distinctive aspect of ecocide.

Faced with this solution and in view of the relevance conferred on the hypothesis of ecocide as a case destined to restore to the environment, including the marine environment, a compulsory protection, we must ask ourselves whether the one chosen by the legislator really represents an identity parameter or whether perhaps we could have sought symptomatic indices more suited to outline a more significant endangering or injury to the protected legal asset.

It will undoubtedly be necessary to oversee the work of transposing the directive into national legislation so that this weak typicality does not turn into discriminatory traits or, even worse, into the failure of a certainly appreciable protection programme.

6. CONCLUDING REMARKS

Criminal protection from the sea as a risk and from the risk of jeopardizing the marine ecosystem is characterized by important systemic deficiencies that require extensive reflection.

A significant starting point is represented by the valorization of the instruments offered by the ECHR to protect the life and health of citizens endangered by member states even when they implement environmental

policies that prove insufficient to protect large portions of territory subject to particularly serious damage.

Valuable examples arise both when the environment represents a risk factor in itself for the population and it is necessary for the state and local authorities to ensure that citizens are protected, and when the environment is the object of damage by man, and this has equally devastating effects on the health and safety of local communities.

Two court cases turn out to be paradigmatic: although they do not involve the marine ecosystem, they are nevertheless fundamental to understanding both what the obligations are to protect citizens from the devastating forces of nature (such as a tsunami) and what the obligations are to protect them when nature is compromised by human factors and this compromise has harmful effects on other parts of the population.

In the first aspect, the Budayeva and Others v. Russia case proves to be of great interest[50].

The case concerned a series of mudslides that struck the town of Tyrnauz in southern Russia in 2000, causing numerous causalities.

For the first time, the Strasbourg Court set out the criteria that must be analyzed to establish whether the conduct of the state authorities complied or not with the positive obligations to protect human rights arising from the European Convention on Human Rights. First, the Court decided whether the risk of the event occurred was predictable by the Russian authorities («foreseeability of the risk»). The analysis was based on several indicators, such as the origin of the danger, the imminence of the risk and the return of the disaster over time. The analysis showed that not only was the town of Tyrnauz notoriously prone to landslides, but the Russian Government had also been warned of the possible event that would occur. From these assumptions, the Court concluded that the Russian Government could have reasonably foreseen the occurrence of the adverse event. After having established the predictability of the risk and the range of the related event, the Court considered if the Russian authorities had done everything they could to protect the rights of the people under their jurisdiction (the so-called «best efforts requirement»). The Court established that Russia government neither dealt resources to prevent the harmful event not even repaired the damages.

50 (European Court of Human Rights, Budayeva and others v. Russia, Applications nos. 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, judgment of March 20, 2008. (See: http://hudoc.echr.coe.int/sites/eng-press/pages/search.aspx?i 003- 2294127-2474035).

Even more relevant is the part in which the Court ruled that the Russian authorities had failed to adequately inform citizens about the risk and to promptly evacuate them from the affected area. All these circumstances allow the Court to recognize the existence of a violation of the right to life under

Art. 2 of the Convention, because Russia failed to implement essential measures to protect people under its jurisdiction.

The Budayeva case is very interesting for many reasons. The first is related to the possibility of recognizing that Art. 2 of the European Convention on Human Rights is a appropriate instrument to establish the State's responsibility for the harmful consequences, arising from the failure to adopt proper risk management measures.

Moreover, the rules of Budayeva and Others v. Russia seems to open the way also for a preventive protection of the legal assets involved. In other words, the judgment tells us that the right to life must be defended by Government not only because of the positive obligations of protection established by the European Convention on Human Rights but also because the occurrence of certain disasters and their impact on the fundamental rights cannot always be unforeseeable by the authorities. So, a Government particularly exposed to certain types of disasters must plan in advance the essential measures to adapt to those consequences.

In this case, the possibility of appealing the Court before the event occurred is possible, however, by invoking the violation of Art. 8 of the Convention.

Under the other and complementary profile of the criminal protection of the environment, as a legal asset in itself and as an element that, when compromised, can create irreversible damage to the population, an essential role must be recognized in the tragic events that involved the city of Taranto and the activities of the Ilva company.

In the grounds of the well-known Cordella and Others v. Italy judgment, the European Court of Human Rights ruled that the Italian legislation was inadequate to meet the demand for protection made by a population that had suffered serious damage due to inadequate management of environmental matrices. The Court found, in fact, that Italy had violated the right to privacy (Art. 8 ECHR) and the right to an effective remedy (Art. 13 ECHR) to the detriment of more than one hundred and sixty people living in the areas surrounding the steel plant. By examining the epidemiological data on the health situation of the exposed populations and comparing them

with the so-called 'save-Ilva' legislation enacted since 2012, the ECHR highlighted how the Italian authorities had failed to strike a balance between the interest of individuals in "well-being" and "quality of life" and that of society in the continuation of production.

Unfortunately, the Court's failure to take any appropriate measures to implement the dictates of the Cordella judgment led to a new and even sharper condemnation of Italy, expressed in its judgment of 5 May 2022 in the appeal Ardimento and others v. Italy. In that case, the European Court of Human Rights ascertained the persistence of violations of Arts. 8 and 13 of the Convention since the Italian authorities continue to neglect to take the necessary measures to protect the health of citizens and to provide effective remedies to achieve the reclamation of the area affected by the pollution.

Although little has changed to date in the environmental management of production activities and the situation of serious environmental pollution, such as to endanger the health of the entire population living in the areas at risk (§ 10 of the judgment), the voice of the ECHR represents a strong denunciation of the current management of the environment in those areas.

Not only that, but reflection on the absolute necessity of guaranteeing swift compliance with ECHR rulings also in the national territory, in accordance with Art. 46 of the ECHR, should be indispensable.

This instrument, together with the implementation process of the EU Directive 2024/1203, represent a real opportunity for a radical rethinking of the forms of protection in the face of the most serious and widespread phenomena of environmental damage.

But the difficulties remain. Both the protection offered by EU Directive 2024/1203 and the protection offered by the European Court of Human Rights in relation to the management of natural phenomena fail to abandon an exquisitely anthropocentric approach that represents their true and most insuperable limitation.

Until man can recognize and honoring his consubstantiality with nature, he will not be equally capable of recognizing its autonomous identity and the need of its protection primarily through the instruments of culture and education.

This respect must be recognized not only for nature as an autonomous force, that influences our lives sometimes unpredictably, but also as an inestimable treasure to be defended with care.

BIBLIOGRAPHY

Accinni G.P., 2018. *Disastro ambientale (dall'horror vacui all'horror pleni)*, Milano: Giuffrè.

Amato D., 2015. «Attività di protezione civile e responsabilità penale: criticità attuali e prospettive di riforma», in *Criminalia*, 391 ff.

Amérigo M., Aragonés J.I., Frutos B., 2007. «Underlying dimensions of ecocentric and anthropocentric environmental beliefs», in *The spanish journal of psychology*, 10, 98 ff.

Amoroso M.C., 2018. «Il disastro ambientale tra passato e futuro», in *Cass. pen.*, 2953 ff.

Angioni F., 1994. *Il pericolo concreto come elemento della fattispecie penale. La struttura oggettiva*, Milano: Giuffrè.

Arenal Lora L., 2022. «La regulación jurídica de los crímenes contra el medio ambiente en el derecho internacional: desafíos para la definición del ecocidio como un crimen internacional», in *Anuario Iberoamericano de Derecho Internacional Penal*, 9, 1-29 ff.

Baker B., 2021. «These Activists Want to Stop Ecocide. The First Step is Making it a Crime», in *GRIST (Mar. 19), https://grist.org/fix/?s=These+Activists+Want+to+Stop+Ecocide.+The+First+Step+is Making+it+a+Crime.*

Bell A., Valsecchi A., 2015. «Il nuovo delitto di disastro ambientale: una norma che difficilmente avrebbe potuto essere scritta peggio», in *Dir. pen. cont. Riv. trim.*, 2, 71 ff.

Bergtora Sandvik K., 2018. entry «Soft Law», in *The International Encyclopedia of Anthropology*, at www.researchgate.com.

Bernardi A., 2015. «Il principio di legalità alla prova delle fonti sovranazionali e private: riflessi sul diritto penale alimentare», in *Rivista di Diritto Alimentare*, 43 ff.

Boscarelli M., 1958. *Contributo alla teoria del "concorso di persone nel reato"*, Padova:Cedam.

Bustos Ramírez J., 1991. *Manual de Derecho penal. Parte especial*, 2nd ed., Barcelona: Ariel.

Canestrari S., 1991. «Reato di pericolo», in *Enc. giur. Treccani*, XXX, Roma, 1 ff.

Carlizzi G., *et al.* (eds.), 2003. *La Corte penale internazionale: problemi e prospettive*, Napoi: Vivarium.

Catenacci M., 2006. «I reati di pericolo presunto fra diritto e processo penale», in Dolcini E., Paliero C.E. (eds.), *Studi in onore di Giorgio Marinucci*, Milano: Giuffrè, 1415 ff.

Catenacci M., 2003. *Legalità e tipicità del reato nello Statuto della Corte penale internazionale*, Milano: Giuffrè.

Chiarelli M., 2019. «La *Soft Regulation* e il caso delle nuove linee guida ANAC», in *federalismi.it* , 3, 1 ff.

Ciampi A., 2015. «Il meccanismo di cooperazione della Corte penale internazionale alla prova dei fatti: che cosa, e perché, non ha funzionato», in *Diritti umani e diritto internazionale*, 1, 153 ff.

Clifford M., Edwards T., 2012. *Environmental crime*, Burlington: Jones & Bartlett Learning.

Contieri E., 2018. «Dal comportamento all'evento nella tutela penale dell'ambiente. Osservazioni in tema di bene giuridico», in G. De Francesco G., Morgante G. (eds.), *Il diritto penale di fronte alle sfide della "società del rischio"*, Torino: Giappichelli, 27 ff.

Corbetta, 2015. entry «Art. 113 c.p.», in Marinucci G., Dolcini E. (eds.), *Codice penale commentato. Parte generale*, Milano: Giuffrè, 1806 ff.

Cornacchia L., 2018. *Inquinamento ambientale*, in Cornacchia L., Pisani N. (eds.), *Il nuovo diritto penale dell'ambiente*, Bologna: Zanichelli, 102 ff.

Costi M., Fronza E., 2020. *Il diritto penale internazionale: nascita ed evoluzione*, in Amati E., et alii (eds.), *Introduzione al diritto penale internazionale*, IV ed., Giappichelli, Torino, 2020, 13 ff.

D'Alessandro F., 2016. «La tutela penale dell'ambiente tra passato e futuro», in *Jus*, 83 ff.

D'Alessandro F., 2012. *Pericolo astratto e limiti soglia. Le promesse non mantenute del diritto penale*, Milano: Giuffrè.

De La Cuesta J.L., 2017. «El derecho al ambiente: su protección por el derecho penal», in *e-Revue Internationale de Droit Pénal*, A-05.

De Santis G., 2017. *Il nuovo volto del diritto penale dell'ambiente*, Rome: Dike Giuridica.

De Santis G., 2012. *Diritto penale dell'ambiente. Un'ipotesi sistematica*, Milano: Giuffrè.

Di Landro A., 2018. *La responsabilità per l'attività autorizzato nei settori dell'ambiente e del territorio*, Torino: Giappichelli.

Fiandaca G., Musco E., 2019. *Diritto penale, Parte Generale*, 8th ed., Bologna: Zanichelli.

Fiandaca G., 1977. «Note sui reati di pericolo», in *Tommaso Natale*, 175.

Gallo M., 1957. *Lineamenti di una teoria sul concorso di persone nel reato*, Milano: Giuffrè.

Gallo M., 1969. «I reati di pericolo», in *Foro pen.*, 1 ff.

Gambardella M., 2002. *Il controllo del giudice penale sulla legalità amministrativa*, Milano: Giuffré.

Gargani A., 2020a. «Fattispecie deprivate. Disastri innominati e atipici in materia ambientale», in *www.lalegislazionepenale.eu.*

Gargani A., 2020b. «Jus in latenti. Profili di incertezza del diritto penale dell'ambiente», in *Criminalia*, 111 ff.

Gargani A. 2020c. «Delitti di pericolo personale e individuale. Osservazioni in prospettiva di riforma», in *www.lalegislazionepenale.eu.*

Gargani A., 2018. «Il rischio nella dinamica dei reati contro l'incolumità pubblica e nei reati di pericolo astratto», in G. De Francesco G., Morgante G. (eds.), *Il diritto penale di fronte alle sfide della "società del rischio"*, Torino: Giappichelli, 7 ff.

Gargani A., 2016. «Esposizione ad amianto e disastro ambientale tra diritto vivente e prospettive di riforma», in *www.lalegislazionepenale.eu.*

Gargani A., 2013. «Omesso impedimento di calamità naturali? La problematica posizione di garanzia posta a carico dei titolari di funzioni di protezione civile», in *www.lalegislazionepenale.eu.*

Gargani A., 2000. «Ubi culpa, ibi omissio: la successione di garanti in attività inosservanti», in *Ind. pen*., 578 ff.

Giunta F., 2008. entry «Tutela dell'ambiente (diritto penale)», in *Enc. dir., Annali*, II, Milano, 1151 ff.

Giunta F., 2002. «Ideologie punitive e tecniche di normazione nel diritto penale dell'ambiente», in *Riv. trim. dir. pen. econ*., 845 ff.

Giunta F., 1999. «La posizione di garanzia nel contesto della fattispecie omissiva impropria», in *Dir. pen. proc*., 620 ff.

Giunta F., 1997. «Il diritto penale dell'ambiente in Italia: tutela di beni o tutela di funzioni», in *Riv. it. dir. proc. pen*., 1097 ff.

González A., Amérigo M., 1999. «Actitudes hacia el medio ambiente y conducta ecológica», in Psicothema, 11, 1, 13 ff.

González Hernández M.T., 2023. «La incorporación del ecocidio al Estatuto de Roma: ¿Una nueva herramienta para combatir la crisis climática?», *Revista De Derecho Ambiental*, 19, 1, 79 ff.

Górriz Royo E.M., 2019. «Criminal compliance ambiental y resposnabilidad de las personas jurídicas a la luz del al LO 1/2015, de 30 de marzo», in *InDret Revista para el Análisis del derecho*, 4, 1 ff.

Griffin A., 1994. «MARPOL 73/78 and Vessel Pollution. A Glass Half Full or Half Empty?», in *Indiana J. Global Legal Stud*., 1, 2, 489 ff.

Guidoboni E., Comastri A., Traina G., 1994. *Catalogue of Ancient Earthquakes in the Mediterranean Area up to the 10th Century*, Rome-Bologna: ING-SGA.

ICC Office of the Prosecutor, 2016. *Policy Paper on Case Selection and Prioritisation, 91 41, (Sept. 15 2016)*, in https://www.icc- cpi.int/itemsDocuments/20160915_OTP-Policy_Case- Selection_Eng.pdf.

ILC International Law Commission, 1991. Yearbook of the International Law Commission, Vol. II, Part 2. A/CN.4/SER.A/1991/Add.1 (Part 2), in https://legal.un.org/ilc/publications/yearbooks/english/ilc_1991_v2_p2.pdf.

Lattanzi G., Monetti V., (eds.), 2006. *La Corte penale internazionale: organi, competenza, reati, processo*, Milano: Giuffrè.

Losappio G., 2012. *Plurisoggettività eventuale colposa. Un'introduzione allo studio nei delitti causali di evento in senso naturalistico*, Bari: Cacucci.

Mantovani F., Flora G., 2023. *Diritto penale. Parte Generale*, XII ed., Padova: Cedam.

Nevola R., Verrengia G., Prestipino M. (eds.), 2023. *I diritti delle nuove generazioni nel nuovo art. 9 Cost. Selezione di contributi di dottrina*, on line www.cortecostituzionale.it/documenti/convegni_seminari/stu_335_a_dottrina_20231010114307.pdf.

Nieto Martín A., 2012. «Bases para un Futuro Derecho Penal Internacional del Medio Ambiente», in *Anuario de la Facultad de Derecho de la Universidad Autónoma de Madrid*, 137.

Ochoa Figueroa A.O., 2014. «Medio ambiente como bien jurídico protegido, ¿Visión antropocéntrica o ecocéntrica?», in *Revista de derecho penal y criminología*, 253 ff.

Olasolo H., Galain Palermo P., 2018. *Los desafíos del derecho internacional penal. Atención especial a los casos de Argentina, Colombia, España, México y Uruguay*, Vol. 1, Valencia: Tirant.

ONU United Nations Environment Programme, 2019. *GEO-6 global environmental outlook*. DOI: 10.1017/9781108627146.

Ovidio Nasone P., 2015. *Metamorfosi*, translation by P. Bernardini Marzolla, Torino.

Padovani T., 2015. «Legge sugli ecoreati, un impianto inefficace che non aiuta l'ambiente», in *Guida al Diritto*, 32, 10 ff.

Palazzo F., 2012. «Il giudice penale tra esigenze di tutela sociale e dinamica dei poteri pubblici», in *Cass. pen*., 1610 ff.

Palazzo F., 1999. *Principi fondamentali e opzioni di politica criminale nella protezione penale dell'ambiente*, in Grassi S., Cecchetti M., Andronio A. (eds.), *Ambiente e diritto*, II, Perugia: Olschki, 548 ff.

Pannain R., 1985. *Manuale di diritto penale. Parte generale,* Milano: Giuffrè.

Parodi Giusino M., 1990. I reati di pericolo tra dogmatica e politica criminale, Milano: Giuffré.

Pedrazzi C., 1991. «Profili penalistici di tutela dell'ambiente», in *Ind. pen*., 619 ff.

Pereira R., 2020. «After the ICC Office off the Prosecutor's 2016 Policy Paper on Case Selection and Prioritisation: Towards an Interriational Crime of Ecocide», in *Criminal Law Forum*, 31, 179 ff.

Persio P.T., 2015. «Il valore "condizionante" delle raccomandazioni del GAFI tra soft law e vocazione prescrittiva», in *Cass. pen*., 2064 ff.

Pisani N., 2018. *Il nuovo disastro ambientale*, in Cornacchia L., Pisani N. (eds.), *Il nuovo diritto penale dell'ambiente*, Bologna: Zanichelli, 112 ff.

Ramacci L., 2021. *Diritto penale dell'ambiente. I principi fondamentali. Gli orientamenti della dottrina e della giurisprudenza*, III ed., Piacenza: La Tribuna.

Riccardi M., 2018. «I "disastri ambientali": la Cassazione al crocevia tra clausola di salvaguardia, fenomeno successorio e concorso apparente di norme», in *Dir. pen. cont.*, 10, 319 ff.

Rizzo Minelli G., 2024. «La salvaguardia dell'ambiente marino tra diritto sovranazionale ed istanze punitive», in *Sistema Penale*, 7-8, 21 ff.

Rotolo G., 2018. *'Riconoscibilità' del precetto penale e modelli 'innovativi' di tutela. Analisi critica del diritto penale dell'ambiente*, Torino: Giappichelli.

Ruga Riva C., 2021. *Diritto penale dell'ambiente. Parte generale: Principi, beni e tecniche di tutela; Parte speciale: Reati contenuti nel d.lgs. n. 152/2006 e nel codice penale*, Torino: Giappichelli.

Ruga Riva C., 2019. *La nuova disciplina dei delitti ambientali*, in M. Pelissero (ed.), *Reati contro l'ambiente e il territorio*, Giappichelli, Torino, 16 ff.

Ruga Riva C., 2016. «Il nuovo disastro ambientale: dal legislatore ermetico al legislatore logorroico», in *Cass. pen*., 4635 ff.

Scarcella A., 2021. *I reati ambientali*, in Lattanzi G., Severino P. (eds.), *Responsabilità da reato degli enti*, vol. I, Torino: Giappichelli, 561 ff.

Ship Structure Committee, 2018. *Ship Structure Committee Case Study XII: Prestige*, in *http://www.shipstructure.org/case_studies*.

Silva C., 2014. *Elementi normativi e sindacato del giudice penale*, Padova:Cedam.

Spasari M., 1956. *Profili di teoria generale del reato in relazione al concorso di persone nel reato colposo*, Milano: Giuffrè.

Tephany Y., 2019. *La protection pénale de l'environnement marin dans les conventions internationales*, in Chaumette P. (eds.), *Transforming the Ocean Law by Requirement of the Marine Environment Conservation - Le Droit de l'Océan*

transformé par l'exigence de conservation de l'environnement marin, Madrid: Marcial Pons, 507 ff.

Valdivielso J., 2005. «La globalización del ecologismo. Del egocentrismo a la justicia ambiental», in *Medio ambiente y comportamiento humano: Revista internacional de psicología ambiental*, 6, 2, 183 ff.

Van der Zwaag D.L., Powers A., 2008. «The Protection of the Marine Environment from Land-Based Pollution and Activities - Gauging the Tides of Global and Regional Governance», in *International Journal of Marine and Coastal Law*, 23, 423 ff.

Consulted translations of Homerus, Pausanias, Thucydides and Xenophon:

Omero, 2010. *Odissea*, translated by Paduano G., Torino: Einaudi.

Pausania, 1945. *10° Libro della "Periegesi della Grecia"*, translated by Arias P.E., Torino: Società Editrice Internazionale.

Tucidide, 1996. *La Guerra del Peloponneso*, translated by Ferrari F., Milano: Fabbri.

Senofonte, 2002. *Elleniche*, translated by Daverio Rocchi G., Milano: Biblioteca Universale Rizzoli.