CROSS BORDERCIVIL LIABILITY FOR ENVIRONMENTAL DAMAGES

Assessing causation: in search of the missing link

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Abstract: Ecological catastrophes damage our property but, moreover, our health, well-being and lives. In this context, it's unavoidable to view civil liability as a key instrument to prevent environmental damage and compensate those affected. Several efforts have been made to provide legal protection both to the environment and citizens, but some questions remain unanswered in a satisfying manner. The *EU Liability Directive* doesn't include an individual's right to compensation, nor does it provide a definition of causality, failing also to clarify how liability should be assigned when several operators have contributed to the damage. As for the *Lugano Convention*, the dire reality is that it has only been signed by nine States and ratified by none. European Courts' jurisprudence tried to clarify some of these matters. Nevertheless, the concept of relevant causation is still vague and difficult to apply, especially when addressing cross border environmental damages. Is there a solution? There are some positive signs in recent developments within the EU, although still insufficient. We propose the solution should be found through mechanisms already known by legislator and courts, concerning allocation of burden of proof, assessment and weighing of evidence (standard of proof), and distribution of risks between multiple operators.

Keywords: environmental damage; civil liability; causality; burden and standard of proof.

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1) Introduction

In the words of Edith Brown Weiss, each generation must look at the Earth and its resources not only as an investment opportunity, but as a trust passed on to us by our ancestors, also to be passed on to our descendants, thus rendering all of us as trustees responsible for the integrity of our planet.[2]

It is well documented ecological catastrophes cause serious damage not only to property, but to our lives and health in such a way that, in the long term, the human species survival may be itself at risk. We only must think about acid rains, desertification, and climate change due to global warming, or about the destruction of the seas and the levels of pollution affecting the air we breathe to make the case for the importance and urgency of environmental protection in an effective manner. In this context, it's

[1] This title is respectfully inspired by Boštjan M. Zupančič's work *Causation in Cases of Environmental Degradation: The Missing Link in Adjudicating Human Rights*, 3 Y.B. POLAR L. 113, 118 (2011).

[2] Weiss, Edith Brown, *In Fairness to Future Generations and Sustainable Development*, American University International Law Review 8, n.º 1 (1992), pp. 19-26.

unavoidable to consider civil liability as one of the main tools at our disposal in both preventing environmental damages and compensating those affected. Unfortunately, the efforts already made show limited success, namely due to specific questions raised in this context and for which traditional civil liability solutions may be maladapted, among which: the dilemma between a fault-based liability and a strict liability system; establishment of causation, namely regarding long-distance damages or situations when the damage occurs much later; apportionment of liability when multiple actors are responsible for the damage, and/or when its effects are intensified by natural phenomena; determination of what is damage eligible for compensation and who has the right to it; limitation periods.

2) Legal Framework and its main challenges

Attention to environmental questions as a matter of global concern has increased since the 70's from last century, when, in 1972, was held the first United Nations Conference on the Environment, in Stockholm. Later, in 1992, the ***Rio Declaration*** provided states should develop national law regarding liability and compensation for the victims of pollution and other environmental damage and, on the other hand, also co-operate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.[3] From these two instruments, the basic principles of environmental law were drawn, namely the *sustained development principle*, the *polluter-pays principle*, and the *precautionary principle*.

The explicit right to a clean and quiet environment isn't included in the ***European Convention on Human Rights*** or its protocols but, as we will see further on, the European Court of Human Rights (ECtHR) has emphasized on several occasions that the effective enjoyment of the rights encompassed in the Convention depends notably on a sound, quiet and healthy environment. As for the European Union (EU), the 1992 ***Maastricht Treaty*** placed environmental protection as one of its main objectives (Articles 2 and 174/2). Nevertheless, we may also consider earlier EU instruments potentially pertinent to environmental civil liability as, for example, the 1985 ***Product Liability Directive***, under which pollutants may be regarded as a type of product and liability imposed for excessive emissions based on defective products causing harm to property and personal interests. In any case, the EU continued to develop its efforts and, in 2000, the *White Paper on Environmental Liability* proposed a liability scheme embracing both *traditional damage* and *environmental damage.* Four years later, the EU Liability Directive came to light.

The EU Liability Directive

While traditional damage liability schemes are based on tort law, requiring property or personal injury, and

[3] https://www.un.org/en/conferences/environment/rio1992

offering compensation as a remedy, environmental damage schemes only require setbacks to the environment and natural resources and are focused mainly on restoring the injured resources, preventing future offenses, and punishing offenders.

In April 2004, ***Directive 2004/35*** (from now on, mentioned as "Directive") was adopted, encompassing a liability scheme of the latter kind. In fact, the Directive expressly excludes an individual's right to compensation as, according to recital 14, "this directive does not apply to cases of personal injury, damage to private property or economic loss". In the same direction, Article 3 (3) states that the "Directive does not give individuals the right to compensation as a result of environmental damage or the imminent threat of such damage". Accordingly, *environmental damage*, as defined by Article 2, is limited to damage caused to protected species and natural habitats (damage to biodiversity), water or soil.

We could say that, in some sense, civil law is completely removed from the text of the Directive, as it doesn't contemplate compensation for personal or economic damages and, although providing for environmental organizations having some rights of action against public authorities, it doesn't provide for such rights to be actioned by those organizations against the operator responsible. The fundamental reason for this is that the essential scope of this model of environmental responsibility is not ensuring compensation for injured persons, but that polluting installations operators are obliged to adopt positive measures to prevent and/or repair damages to the environment. Accordingly, Annex II of the Directive states that *compensatory remediation* is any action taken to compensate for interim losses of natural resources and/or services that occur from the date of damage occurring until primary remediation has achieved its full effect, further clarifying that *interim losses* don't consist of financial compensation to members of the public.

There are other aspects of this Directive that may merit some additional remarks. The Directive is based in the *polluter-pays principle* (Article 1, recitals 2 and 18), in the sense the costs of repairing environmental damage will be borne by the polluter. However, when the polluter cannot be identified, cannot pay, or presents a valid defense, this principle is rendered ineffective, adding to which, in these situations, although public authorities may restore the environment, they are not obliged to do so. It is true that all Member States' public administration is responsible for protecting the environment, namely when issuing permits for installations, determining which conditions are necessary for those permits and verifying compliance. But the Directive could have gone further, namely providing the administration with the power to adopt corrective measures leading to stricter licensing conditions and more rigorous control of potential polluters. Also of note that, in the event of an environmental accident, an unforeseen and sudden event, harmful for the environment and requiring restoration, Member States may declare the polluter won't bear the costs of restoration if he has acted in accordance with a permit or if there is a so-called development risk (Article 8 (1) (a) and (b)), which largely may render the restoration of the environment unfeasible. On the other hand, the Directive is applicable only when the polluter is at fault or acted with negligence (Article 3 (1) (b)) in

relation to professional activities not listed in Annex III, which predictably will be very difficult to demonstrate if a license to carry out the activity has previously been granted.

It should also be highlighted that one of the main difficulties in applying the Directive is not directly related to environmental damage caused by accidents, but rather to the fact the environment is weakened and degraded. For example, as a rule, car traffic complies with emission limits but, nevertheless, contributes to air pollution, harming the environment and human health; agricultural activity, intensive livestock farming and other practices are legal but, nevertheless, contribute to groundwater and water pollution and soil contamination. In these situations, Directive 2004/35 does not translate into a great solution as it fails to address the problem posed by multiple cumulative causes emerging from different sources and at different moments in time when establishing causation between an activity and the damage to the environment.

In any case, this Directive undeniably establishes a common European starting point, paving the way for further developments, and leaving to each Member State the possibility to go further, namely by providing, in its national legislation, that individuals are entitled to compensation and by setting the conditions necessary for granting that compensation.

The Lugano Convention

The ***Lugano Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment*** was signed in 21.VI.1993, aiming to ensure adequate compensation for damages resulting from activities dangerous to the environment, as well as means of prevention and reinstatement. As in the Directive 2004/35, its basic principle is that of the *polluter-pays*, thus placing the economic burden where it properly belongs. But this Convention went further, also foreseeing compensation for damages suffered by individuals, including in the definition of *damage* not only loss or damage by impairment of the environment, but also loss of life or personal injury and loss of or damage to property (Article 2 § 7). A *strict liability* regime for damage caused to the environment is provided, thus offering more stringent protection, imposing liability on the operator of the activity, defined as the person exercising control over a dangerous activity (Article 2 § 5).

The Lugano Convention also addresses some of the aforementioned problems. Regarding causality, Article 10 states that, when considering evidence of the causal link between the incident and the damage or, in the context of a dangerous activity as defined in Article 2, paragraph 1, sub-paragraph d, between the activity and the damage, the court shall take due account of the *increased danger of causing such damage* inherent in the dangerous activity. In sequence, the Explanatory Report to the Convention, trying to facilitate the understanding of this provision, states that the Convention does not create a true presumption of a causal link, operating this provision "as a complement to the system of strict liability" and forming "part of all the rules which are designed to assist the person who has suffered damage to prove the causal link which may,

in practice, be difficult". It also provides the Court must consider the increased risk of damage from a specific dangerous activity in order to assist the person suffering the damage to obtain compensation. However, the Explanatory Report doesn't clarify how the causal link should be considered in the cases where a specific dangerous activity is not in place, if a fault-based liability is in check or whether cross-border damage is involved.

Article 11 tackles the problem of multiple actors, stating that when damage results from incidents which have occurred in several installations or on several sites where dangerous activities are conducted or from dangerous activities under Article 2, paragraph 1, sub-paragraph d, the operators of the installations or sites concerned shall be jointly and severally liable for all such damage; but if the operator proves that only part of the damage was caused by an incident in the installation or on the site where he conducts the dangerous activity or by a dangerous activity under Article 2, paragraph 1, sub-paragraph d, then he shall be liable for that part of the damage only. Correspondingly, Article 9 provides that if the person who suffered the damage or a person for whom he is responsible under internal law, has, by his own fault, contributed to the damage, the compensation may be reduced or disallowed having regard to all the circumstances.

Being extremely difficult to hold someone responsible for these types of events, determine the real damage, who controls the risks and establish causation, the Lugano Convention attaches great importance to access to information. Since solid technical evidence is usually needed to build a case, ensuring that sufficient access to information on technical details of the agents' actions is provided minimizes this difficulty.

Main challenges

Environmental concerns and the enactment of national and supranational legislation on the environment have increasingly become the focus of populations, which makes this area of law very recent and still with some edges to clean up and shape. For this reason, we cannot be surprised by its constant change, growth, and evolution, to adapt to the needs of peoples and to new technologies. But does the existing legal framework already in force on a supranational level offer sufficient and adequate protection for those affected by environmental damage?

The ***Lugano Convention*** allows ratification by non-members of the Council of Europe, which is particularly important regarding the transboundary nature of climate change. But, having been adopted in 1993, due to scientific and legal developments occurred in the meantime, it clearly must be updated and adapted in order, namely, to assign civil liability for the negative impact on the climate. Notwithstanding that, one of the main issues concerning the Lugano Convention is that, up until now, only 9 States have signed it and none has yet ratified it, which makes us wonder if, at this point, this Convention is (still) regarded as an important instrument, putting in question its future development and entry into force.

As for the ***Directive***, the following aspects are, in our opinion, particularly relevant in this analysis:

I – As previously highlighted, the Directive expressly excludes its application to the so-called traditional damages: personal injury, damage to private property or economic loss. Consequently, if, for example, an operator discharges toxic material into a small stream that only flows into a lake owned by an individual person, the latter cannot claim compensation for the damage suffered under this Directive and must seek remedy under the national legislation applicable. In this context, if facing a cross boarder event, difficulties of great importance may arise in the absence of harmonization between national tort laws. By providing a very limited definition of damage and of environment protected, the Directive offers insufficient protection to those at risk to be affected by environmental damages.

II – For the Directive to be effectively applicable, one or more operators must be identified, in line with the principle of the polluter-pays. If the polluter can't be identified, or if the person causing the damage has no means to repair, it will be up to State authorities to take control of the damage and adopt the measures appropriate to restore the ante-environmental status. The problem lies in that this State responsibility, subsidiary and without translating into a real obligation, will predictably be often overlooked in favor of other social, economic, or political reasons. On the other hand, the Directive also fails to foresee an obligation for the States to not grant permits or authorizations for activities potentially harmful for the environment unless some specific requirements were met, such as, for example, setting up a guarantee fund for the foreseeable ecological and environmental damages or taking out a high-risk insurance contract in benefit of the authorizing State.

III – Finally, the Directive left open the definition of the relevant causal link between the harmful event and the damage. The Directive states that, for it to be applicable, we must be in the presence of an environmental damage within the three identified limits (habitat, water, and land), and identify the cause of the damage in the sense that a causal link must be established between the damage and the identified operator. But can it be said that, by stating the necessity of a causal link, the Directive is also defining the relevant criteria to establish it? We believe that the answer is negative. In fact, we are dealing with a diffuse concept whose definition was been left to each State. And the problem is that, within each State, we can find different definitions of legal relevant causality, ranging from *conditio sine qua non*, serious probability, adequate cause, creation/augmentation of risk or even no definition in the legal texts, leaving for the courts the task to define it.

Let's take a closer look at this last problem.

One encounters several obstacles when trying to establish causation in environmental damage, whether we move in a strict liability scheme or in a fault-based scheme. The difficulty in defining who is liable is intensifying, in accordance with the increased complexity created by expanding industries and new technologies, whose competition has been skyrocketing with the growth of society and its needs. Due to the ubiquity of toxic substances, the interactions between exposure to those toxics and other factors (natural

factors, third party factors, or preexisting conditions of the injured party), and the frequency of considerable latency periods (which may prove to be even transgenerational), causality, in this context, is notoriously difficult to prove. More so if the plaintiff is required to prove both factual causation (also known as *sine qua non*, to be proven mainly by a contrafactual inquiry, where the "*but-for*" test is the most well-known) and legal causation (such as the factual cause also being adequate or proximate).

In what concerns environmental damage, allocating the burden of proof of factual causation, as such viewed (proof of *conditio sine qua non),* on the injured party may be excessive, not only because it can be hard to prove by an individual with little access to scientific information and to the specific conditions of the operator's activity, but also because the "*but-for*" test can't be met in situations where several causes have contributed to the damage, being all of them sufficient to independently cause it without the contribution of the others: in this situation, the answer to the "*but-for*" test is be negative, thus preventing compensation.

On the other hand, concepts of *proximate cause* or *adequate cause* may also result in unsatisfying solutions. Let's think, for example, of the case where, being exposed to a polluted environment, Mr. X develops a heart condition; years later, driving his car, he passes out from that condition which, by itself, would not be lethal; by passing out, he crashes his car and dies from the injuries suffered in result. The proximate cause of death wasn't the exposure to pollution but the car crash; and the concept of adequate cause may also be unsatisfying, namely in some interpretations, since the exposure and subsequent heart condition were not adequate, *per se*, to independently cause death without the contribution of another event.

Even when the law or the courts allow the lowering of the standard of proof needed to establish a fact (following, for example, the standard of *preponderance of evidence* in the place of more rigorous standards such as *proof beyond any reasonable doubt* or *clear and convincing evidence*), or the use of inferential reasoning to establish causation (example: in order to prove event A was *conditio sine qua non* of damage B, the injured party has only to establish, having both A and B occurred, that A was, *in general*, *capable* of causing B), this conceptualization of the relevant causal link may still be considered insufficient, namely to address the problem of alternative, or uncertain, causation. Let's consider the following example: factory A and factory B have independently discharged a toxic component into a stream; the agriculture exploration of C suffered damages caused *by only one* of those toxic components, toxic A *or* toxic B, without being established which one (A or B) caused, in fact, the damage. In these types of cases, the "*but-for*" requisite is not met, as we can't say that if A didn't discharge the toxic component, C would not have suffered the damage (and the same regarding B).

From the point of view of law and economics, the task of balancing conflicting interests remains difficult as well: if the bar is set too high in what concerns the proof of causality, the deterrence of future harmful actions may be compromised; conversely, if the bar is set too low, it may open the door to frivolous claims.

Several States[4] adopted the concept of causality based on the criterion of the probability of the behavior causing the damage, although differences can be detected regarding the greater or lesser burden of proof of the injured party and the defendant, namely according to the type of causal nexus adopted: i. probability of the injurious event *being capable of causing* the verified injury or ii. probability that the injurious event *caused* the verified injury. In the first hypothesis, the burden of the injured party is lightened, as he only must prove a certain behavior as being capable to cause the damage. Having proven this, it will be up to the defendant, usually more prepared and with access to more information, to tackle the Herculean task of dispelling that probability by demonstrating, with a degree of certainty, that the act did not, in fact, cause the damage.

In close relation lies the question of how to apportion liability when several operators have been found to be responsible the damage. In this matter, the Directive maintains a position of non-interference, leaving once again the task for the Member States. The option for joint and several liability, in the stead of proportional liability, is somewhat easier to sustain when the liable operators acted simultaneously. But the discussion is more intense in other situations, namely the cases of subsequent cumulative causation or alternative causation. The option between joint and several liability and proportional liability is not innocuous, as it will affect the injured party in case of insolvency of one or several operators found liable.

Considering the specificities of environmental damages and the absence of uniform solutions at a national level, we believe the Directive should have addressed the problem directly.

3) The CJEU and ECHR caselaw

As pointed above, not only the legal instruments adopted within the European mainframe give insufficient protection to the victims of environmental damages, but they also fail in helping law practitioners and courts to find a uniform interpretation of certain concepts, particularly when in the presence of cross border environmental damages. The insufficient approach of the Directive and the fact that the Lugano Convention is still waiting to enter in force have created a gap demanding greater interpretative activity by national and supranational courts. Although the two main European Courts have tried to bring more definition to certain concepts, the definition of the relevant causal link for this purpose remains contentious.

The European Court of Human Rights (ECtHR)

The ECtHR has been developing some case-law aimed at clarifying the conditions under which an environmental issue may arise under the European Convention on Human Rights (from now on, "Convention"). Even though the Convention does not explicitly establish a right to a healthy environment, nevertheless, the ECtHR has emphasized that serious damage to the environment can affect the well-being

[4] Hinteregger MONIKA, *The Common Core of European Private Law*, available at: www.cambridge.org/9780521889971

of individuals and environmental damage directly concerns with a wide range of human rights, such as the right to life, the right to a fair trial, the right to private and family life, and property rights[5].

In this context, most of the cases dealt by the ECtHR concerning toxic exposures have fallen under Article 2.º (right to life) and Article 8.º (right to private and family life) of the Convention.

Do each of this Articles demand different approaches on causality?

In the opinion of Katalin Sulyok, "in claims brought under the right to life, causality is relevant at several stages of the inquiry: first, in deciding the applicability of the provision, and subsequently, as to the finding of a breach (…) and the causal link between the alleged violation and the applicant's death or imminent threat to her life lies at the core of the inquiry"; but, for Article 8.º, "proving a causal link between the pollution and the health impairment is a sufficient, but not necessary, requirement".[6] In fact, as the Author quoted reports, in ***Brânduşe v. Romania***, a prisoner suffering from noxious odors from a nearby rubbish tip succeeded with his claim in the clear absence of any health injury, having the Court found that wellbeing can be affected even in such cases.

But that is not to be taken as a general rule, since a brief analysis of the Court case-law shows most applications have failed to meet the admissibility criteria concerning causality.

In ***Tătar v. Romania***, the applicants, father and son, complained the technological process used by a company and the environmental accident that occurred at its site constituted a threat to their lives and health, having aggravated the son's asthma, and that national authorities had failed to take any action. In its decision from 27.01.2009, the ECtHR found a violation of article 8 of the Convention, to the extent that "Romanian authorities had failed in their duty to assess, to a satisfactory degree, the risks that the activity of the company operating the mine might entail, and to take suitable measures in order to protect the rights of those concerned to respect for their private lives and homes, and more generally their right to enjoy a healthy and protected environment"[7]. However, the Court considered the applicants had failed to prove the existence of a causal link between the exposure and the son's asthma. In this assessment, the ECtHR refused to follow a probabilistic approach, stating that, although it had been demonstrated the son suffered from asthma, sodium cyanide was a toxic substance which could, under specific conditions, endanger human health, and a high degree of pollution had been detected in the vicinity of the applicants' home following an environmental accident in January 2000, the concentration of sodium cyanide required to aggravate respiratory illnesses was still unknown. The Court added that the scientific uncertainty wasn't accompanied by sufficient statistical evidence and the document produced by a hospital attesting to a certain increase in

[5] Department for the execution of judgments of the European court of human rights – Thematic Factsheet > Environment, October 2020;

[6] Sulyok, Katalin, *Managing Uncertain Causation in Toxic Exposure Cases: Lessons for the European Court of Human Rights from U.S. Toxic Tort Litigation* (June 20, 2017). Available at SSRN: https://ssrn.com/abstract=2989876

[7] Environment and the European Convention on Human Rights – Factsheet - January 2022;

the number of diseases of the respiratory tract wasn't sufficient to create a causal probability[8].

Of particular note the dissenting opinion by one of the Judges, subscribed by another: in their opinion, the presence of a favorable circumstance combined with the absence of a discernible cause made the causality sufficiently probable for it to be established; thus, having been presented an official report indicating an increase in the number of diseases of the respiratory system in the vicinity, the proof of the absence of harmfulness should have been made, in principle, by the State, without imposing on the applicants an impossible burden, especially in the absence of information concerning the harmful effects of sodium cyanide on the human organism.

In ***L.C.B. v. the United Kingdom***, the applicant's father had been exposed to radiation during nuclear tests in the 1950s. The applicant was born in 1966 and later contracted leukemia, alleging that the State's failure to warn and advise her parents of the dangers of the tests to any children they might have, as well as the State's failure to monitor her health, were violations under Article 2. In its decision from 8.06.1998, the ECtHR considered that the applicant had not established a causal link between the exposure of her father to radiation and her own suffering from leukemia and concluded it was not reasonable to hold that, in the late 1960s, the State's authorities, based on this unsubstantiated link, could or should have acted.

In ***Smaltini v. Italy***, the applicant argued emissions from a steel factory affected her health, later causing her death (the proceedings were continued by her family). She had brought proceedings before national courts, which were discontinued. Before the ECtHR, the applicant alleged the decision to discontinue those proceedings had breached her right to life under Article 2. In its decision from 24.03.2015, the ECtHR declared the application inadmissible, observing that, according to the reports examined by the domestic courts, the incidence of leukemia was no higher in the region in question than in other regions of Italy. The Court also noted the applicant had had the benefit of adversarial proceedings, concluding she had failed to demonstrate, in the light of the scientific data available at the time, national authorities had failed in their obligation to protect her right to life under the procedural aspect of Article 2[9].

In ***Calancea and Others vs. Republic of Moldova***, the applicants' houses were built in 1999 and 2001, both ten meters from a high-voltage power line that began operating in the 1960s. Mrs. Calancea suffered from a heart condition, Mr. Calancea was diagnosed with cancer in 1998, and suffered from high blood pressure and hypertensive heart disease. In 2004, the applicants brought an action seeking to have the high-voltage line moved far enough away to conform to technical and health standards. National courts dismissed their action as unfounded, noting the houses had been built after the high-voltage line had come into operation and without the agreement of the network operator. In its decision from 6.02.2018, the ECtHR noted the local authorities had granted permission to build the houses inside the twenty-meter protection zone

[8] As explained in Guide to the case-law of the European Court of Human Rights – Environment - Updated on 31 August 2021;
9 See note 6;

surrounding high-voltage lines, apparently in breach of the technical regulations in force but this fact, in itself, was not sufficient in order to find a violation of Article 8. It also found the applicants had not demonstrated the strength of the electric field recorded on their land had been such as to pose a real risk to their health, observing that all the readings recorded were well below the limit of 5kV/m recommended by the WHO. The Court therefore considered that it had not been demonstrated that the strength of the electromagnetic field created by the high-voltage line had attained a level capable of having a harmful effect on the applicants' private and family sphere, holding that the minimum threshold of severity required to find a violation of Article 8 of the Convention had not been attained.

When establishing a causal link between certain harm and a source of pollution, the ECtHR has generally demanded applicants to present evidence such as medical certificates or reports (*inter alia*, ***Fägerskiöld v. Sweden***, 2008; ***Cuenca Zarzoso v. Spain***, 2018), highlighting in various occasions, though, that a probabilistic approach would not be sufficient to prove causality.

For instance, in its decision in ***Aleksandar Mastelica and Others v. Serbia*** (2020), the Court emphasized that, in assessing evidence, it has generally applied the standard of proof *beyond reasonable doubt*, adding that "such proof may follow from the coexistence of sufficiently strong, clear, and concordant inferences or of similar unrebutted presumptions of fact, and it has been the Court's practice to allow flexibility in that respect, taking into consideration the nature of the substantive right at stake and any evidentiary difficulties involved (…)." In practical terms, though, only in the case of ***Tătar v. Romania*** we can find the calling for a probabilistic approach and only in a dissenting opinion, as mentioned above.

Assessing this trend, Katalin Sulyok points out that "it is notable that an applicant has almost never successfully proven causation based on uncertain evidence when the causal link is disputed by the other party. Instead, violations are declared when the defendant government does not contest the causal link surrounding the harmful effects. This provides a convenient factual basis for the Strasbourg Court to find a violation without assessing the probative value of scientific evidence". Noting that "a causal connection between the violation and the damage sustained is also relevant to awarding compensation", this Author concludes that the ECtHR has a "restrictive view when it comes to assessing causation under Article 41, even in cases when the underlying facts do not involve complex scientific expert evidence".[10]

Particularly in the field of environmental damage, we agree the ECtHR should consider adopting a more nuanced vision of the issues concerning causality and the parties' burden of proof, namely admitting the proof of causality by means of probabilistic and statistical scientific evidence, and/or reversal of the burden of proof in a way that, having the plaintiff been successful in proving the event in question increased the risk of occurrence of damage, it will be up to the other party, to avoid liability, to prove the damage wasn't, in fact, caused by the event. This solution provides, in our opinion, a more balanced distribution of risk,

[10] Sulyok, Katalin, *Managing Uncertain*…

thus allowing the award of adequate compensation to victims and the prevention of future harms in a more effective way, but still keeping in place the floodgates preventing frivolous litigation.

The Court of Justice of the European Union

As pointed out by the Commission to the European Parliament and to the Council, concerning the establishment of the causal link, "the polluter-pays principle as materialized in the ELD requires the establishment of a causal link between the liable activity and the environmental damage or the risk. Since the ELD itself does not specify how such a causal link is to be established, such a definition falls within the competence of the Member States"[11] .

In **Case C-378/08,** the CJEU offered some clues to help establishing causation, declaring that "if it is necessary for the competent authority to establish such a causal link in order to impose remedial measures on operators irrespective of the kind of pollution involved, then that requirement is also a condition for the application of the directive in the case of pollution of a diffuse, widespread character. Such a causal link could easily be established where the competent authority is confronted with pollution which is confined to a particular area and period of time and is attributable to a limited number of operators". But the Court also highlighted that such is not the case with diffuse pollution phenomena and, therefore, the legislature of the European Union considered that, in the case of such pollution, a liability mechanism is not an appropriate instrument where such a causal link cannot be established. Consequently, Article 4 (5) of Directive 2004/35 provides that the directive is to apply to that kind of pollution only where it is possible to establish a causal link between the damage and the activities of individual operators. In that regard, it must be noted that Directive 2004/35 does not specify how such a causal link is to be established. Under the shared competence enjoyed by the European Union and the Member States in environmental matters, where a criterion necessary for the implementation of a directive adopted on the basis of Article 175 EC has not been defined in the directive, such a definition falls within the competence of the Member States", because "where no causal link can be established between the activity and the environmental damage or the imminent threat of damage, such a situation does not fall within the material scope of the ELD and has, therefore, to be treated under national law"[12].

In **Case C-534/13**, the CJEU clearly stated that "in order for the environmental liability mechanism to be effective and for remedial measures to be required of an operator, the competent authority must establish a causal link between the activity of one or more identifiable operators and concrete and quantifiable damage, irrespective of the type of pollution at issue", adding that "the competent authority's obligation to establish

[11] Commission staff working document, refit Evaluation of the Environmental Liability Directive, Report from the Commission to the European Parliament and to the Council pursuant to Article 18(2) of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage, Brussels, 14.4.2016, SWD (2016) 121 final;
12 Sharing the same view, cases C-379/08 and C-380/08;

a causal link applies in the context of the system of strict environmental liability of operators (…) and also applies in the context of the fault-based liability system — under which liability arises from fault or negligence on the part of the operator".

In **Case C-129/16**, the CJEU, after alluding to its case-law on causality (mentioned above), goes further when stating that "it must be noted that Article 16 of Directive 2004/35 grants Member States the power to maintain or adopt more stringent provisions in relation to the prevention and remedying of environmental damage, including the identification of additional activities to be subject to the prevention and remediation requirements of that directive and the identification of additional responsible parties (…)" and, therefore, it is in compliance with the EU treaties any national provisions that "identifies another category of persons who, in addition to those using the land on which unlawful pollution was produced, share joint and several liability for the environmental damage, namely the owners of that land, without it being necessary to establish a causal link between the conduct of the owners and the damage established".

Analyzing the decisions listed above, it seems that, although the CJEU tried to clarify the scope of the Directive and unify the interpretation of some of its provisions, the setting of requirements for the establishment of causation only merits a timid reference in the first decision (C-378/08), leaving to the Member States national legislation further efforts to better define those requirements.

In this context, of note the Advocate General's opinion in Case C-378/08: "it would be possible – subject to the rules laid down in the Environmental Liability Directive on establishing the causes of damage (...) to conceive of national rules which establish rebuttable presumptions on the causation of damage".

4) Is there a Solution?

In the absence of consensus regarding what is needed to establish causality in the field of environmental damage, should we consider that there's nothing more to be done, after all these years? Or should we continue to strive for the setting of uniform criteria, namely in the European space?

We still believe that a more uniform solution can be found, namely through mechanisms already known by legislator and courts, concerning allocation of burden of proof, assessment and weighing of evidence (standard of proof), and distribution of risks between multiple operators.

As explained above, the ECtHR uses *the beyond-a-reasonable-doubt* standard and while it emphasizes that it allows flexibility in this respect, the truth is, as demonstrated, there are a lot of difficulties involved in its practice as it rarely accepts probabilistic proof of causation.

Some scholars suggest a different allocation of the burden of proof: in most systems, the burden of proof is born completely by the plaintiff[13]; however, in some circumstances, in particular when the activity of the defendant is dangerous in a significant manner, increasing the risk of occurrence of damage, the burden of

[13] For better understanding, Sulyok, Katalin, *Managing Uncertain*…

proof should be reversed into the benefit of the plaintiff, thus accommodating the specific challenges raised by environmental liability.

Other scholars suggest a system of proportional liability based on the probability of causation, *id est*, a causal link could be established if there were less than a 50% probability of causation, but the defendant would only be held liable to the extent of that probability[14].

In this context, there are many lessons we can take from the United States of America case-law, which has a long history of environmental liability cases. There we can find a lower standard of proof (the *more probable than not* standard, or *balance of probabilities*) and, as pointed out the Katalin Sulyok, "the toxic tort example suggests that the balance of probability is a workable compromise between the law's need for certainty and the inescapably uncertain results of scientific research".[15]

We can also find the widespread acceptance of, and reliance on, probabilistic proof of causation, and a wider assessment of the causal link (namely applying the alternative liability theory in cases where it is not possible to prove which one of the defendants' identical conducts was the actual cause of injury). In other words, courts should rely more on statistical evidence to prove general causation, thus improving the court's responsiveness to uncertain causes and alternative defendants.

Katalin Sulyok suggests the following three factors to improve the assessment of the causal link in environmental liability cases, with which we agree: "(1) taking a closer look at scientific evidence and openly evaluating its probative force; (2) accepting probabilistic evidence as proof of uncertain causation; and (3) applying the balance of probability as the standard of proof of uncertain causation. Embracing these proposals would help the courts to apply a more objective and consistent approach to decide the alleged violations in toxic exposure cases."[16]

Just a few words regarding the situation in Portugal, where Law-decree n.º 147/2008 transposed the Directive 2004/35 UE, and is applicable to environmental damage, as well as the imminent threats of such damage, caused as a result of the exercise of any activity carried out within the scope of an economic activity, regardless of its public or private nature, profitable or not, abbreviated as occupational activity.

Its article 5.º provides that "the assessment of the evidence of the causal link is based on a criterion of likelihood and probability that the harmful event is capable of producing the observed injury, taking into account the circumstances of the specific case and considering, in particular, the degree of risk and danger and the normality of the harmful action, the possibility of scientific proof of the causal course and the fulfilment, or not, of protection duties".

[14] Sulyok, Katalin, *Managing Uncertain…*
[15] Sulyok, Katalin, *Managing Uncertain…*
[16] Sulyok, Katalin, *Managing Uncertain…*

This concept of causality – applicable to both types of liability, strict and fault-based – intends to lighten the standard of proof required by adopting a probability criterion linked to scientifically evidence, also entailing an implicit reversion of the burden of proof. Thus, in Portugal, all "that the injured party has to prove is, in short, the probability that the installation is capable of causing the damage. In other words, the injured party has, in short, to demonstrate the probability of the creation or increase of the risk by the installation, of the risk by the agent, «considering the circumstances of the specific case» (concrete and not abstract risk). (…) The agent, in turn, can counterprove the probability of the risk (bringing to the process the elements that allow the judge's conviction about that probability to be destroyed) but can also, of course, make the negative proof of the materialization of the risk in the harmful result. I.e., it can demonstrate that, although the creation of the risk is probable, it was not this risk that materialized in the damage that occurred.[17]"

However, even though Article 4.º provides a rule of joint and several liability when more than one agent is responsible, Portuguese legislation still doesn't address the problem of alternative causality.

Taking all this into account, we propose the following general rules (special rules may be necessary in more specific contexts) for the assessment of causation in environmental damage:

1. To establish the causal link between the incident/activity and the damage, the injured party must prove the occurrence of both, and that the incident/activity *increased the danger of causing the damage*.
2. If those facts have been successfully proven, it will be the operators' burden to prove their activity did not, in fact, cause the damage (negative *conditio sine qua non*).
3. The standard of proof applicable is the *more probable than not standard*.
4. The use of reliable statistical scientific evidence is admissible.
5. When the damage results from incidents having occurred in several installations/activities, its operators shall be jointly and severally liable for the whole damage, unless it's proven the damage was not, in fact, caused by his installation/activity (negative *conditio sine qua non*).
6. Having compensated the injured party for more than his or her individual contribution for the increase of danger of causing the damage, the operator can recover the excess from the other operators in proportion to their individual liability.
7. If the person who suffered the damage or a person for whom he is responsible has, by his own fault, contributed to the damage, the compensation may be reduced or disallowed having regard to all the

[17] As pointed out by Oliveira, Ana Perestrelo de, *A prova do nexo de causalidade na lei da responsabilidade ambiental*, Atas do Colóquio, A responsabilidade civil por dano ambiental, Instituto de Ciências Jurídico-Políticas, Maio de 2010, Faculdade de Direito de Lisboa;

circumstances.

5) Recent developments

On 23 February 2022, the European Commission (Commission) released a proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence (CSDD) and amending Directive (EU) 2019/1937. This proposal, if approved, will require large companies to carry out due diligence to identify and address adverse human rights and environmental impacts of their operations, subsidiaries and value chains, and to produce climate plans, also providing for civil liability in the event of violations of the due diligence obligations imposed on in-scope companies, as well as supervision, enforcement and complaints (article 1).

The Proposed Directive would apply to both EU-based companies and companies incorporated in third countries, depending on its size, sector, and source of revenue: a) companies based in the EU with more than 500 employees and a net worldwide turnover of more than EUR 150 million during the last financial year; b) companies based in the EU with more than 250 employees and a net worldwide turnover of more than EUR 40 million in the last financial year, if at least half of that net turnover was generated in specific high-risk sectors; c) companies established outside the EU with either (i) a net turnover in the EU of more than EUR150 million during the financial year preceding the last financial year, or (ii) a net worldwide turnover of more than EUR 40 million but a net turnover in the EU of less than EUR 150 million, if at least50% of the net worldwide turnover was generated in the high-risk sectors.

The Proposed Directive is not applicable to small and medium enterprises, although they may be impacted if operating within the value chains of the companies that are included in the scope of the proposal .

Concerning to the matter of this paper, the Proposed Directive brings a new approach to civil liability when applied to larger companies in high-risk sectors (Article 22.º).

In the words of Anna Cavazzini, “Member States are required to lay down rules in line with the provisions of this Directive, governing the civil liability of the company for failure to comply with its due diligence obligations. The civil liability applies for damages arising from own operations, subsidiaries, and established business relations (where the company has regular, lasting, and frequent cooperation with that business relationship). For the latter, liability applies only where the adverse impact could have been foreseen, prevented, ceased, or mitigated with appropriate due diligence measures. However, liability is excluded when the damage relates to an indirect partner where the company did conduct due diligence, unless it was unreasonable for the company to expect that its due diligence actions would be adequate. Moreover, member States shall ensure that the liability provided for under this Directive is of overriding mandatory application in cases where the law applicable to claims to that effect is not the law of a Member

State, i.e., the EU law will apply even in cases where the harm took place outside the EU".[18]

It merits applause that the Proposed Directive combines both administrative and civil liability, introducing a civil liability clause to ensure that companies can be held liable for harm caused to private parties, thus improving victims' access to justice.

The already in force ELD establishes a framework for environmental liability, based on the polluter-pays principle, for companies' own operations, thus not covering companies' value chain. Therefore, the civil liability regime introduced by the Proposed Directive will be complementary to the one in the ELD also in this regard.

Also meriting a positive note is the extension of its applicability to cases where the harm took place in a non-EU country. In fact, the already existing EU environmental law does not generally apply to value chains outside the EU, even though, as stated in the initial reasoning of the proposal, they may be accountable for up to 80-90 % of the environmental harm resulting from EU production.

Unfortunately, this Proposal Directive isn't immune to critics.

In fact, the proposal was born to deal with the existing differences between national rules on sustainable corporate governance and due diligence, which can impact the functioning of the internal market, taking also into account that these differences would predictably become more serious with time as more and more Member States would adopt diverging national laws. For this reason, the Proposed Directive suggests a new civil liability regime, clarifying which rules apply either in the case the harm occurs in a company's own operation, or at the level of its subsidiaries or at the level of direct and indirect business relations in the value chain, trying at the same time to ensure harmonized rules in cases where otherwise the law applicable to such claim is not the law of a Member State.

Nevertheless, the Proposed Directive left several gaps behind. For one part, as pointed out by Jeffrey Vogt, the "civil liability section is unfortunately drafted in such a way that it will be difficult to use. Article 21(1)(a) provides that member states ensure that companies can be held civilly liable if they failed to take appropriate measures to prevent or minimize potential adverse impacts or ending actual adverse impacts as set forth in Articles 7 and 8 when those adverse impacts occurred and led to damage. While this may sound right, recall that Articles 7 and 8 may be satisfied by entering into contracts with business partners to respect a code of conduct or prevention plan, and that the code is verified by a third-party auditor. Thus, a company may be essentially immune from civil liability if it entered into such an arrangement, unless the injured party were able to prove that these assurances or prevention plan were not appropriate measures – a tall order unless the fact of the harm is itself evidence of the measure not being appropriate».[19]

[18] Cavazzini, Anna, *Proposal for a Directive on Corporate Sustainability Due Diligence: initial analysis*, 2022. Available at: https://www.annacavazzini.eu/wp-content/uploads/Analysis-of-EU-due-diligence-proposal_23-Feb.pdf

[19] Vogt, Jeffrey, *A Missed Opportunity to Improve Workers' Rights in Global Supply Chains*, 2022. Available at: http://opiniojuris.org/2022/03/18/a-missed-opportunity-to-improve-workers-rights-in-global-supply-chains/

The Author also points out that proposal is silent as to which damages are available, the same happening regarding burden of proof and standard of proof, the definition of which, once again, is left to national law. In addition, Anna Cavazzini also points out that as "the proposal conditions liability for harm taking place in the value chain applies only to situations where the company has a regular, lasting and frequent cooperation with the supplier in question, this could have the unintended effect of European companies designing their supply chains in a way that guarantees them more distance and constant change instead of closer cooperation in order to avoid liability". Moreover, this Author also explains that «the proposal limits liability even further in cases of human rights and environmental harm taking place with regards to indirect suppliers. Here, the proposal suggests that a company shall not be held liable unless it can be proved (assumedly by victims) that its due diligence actions had been unreasonable, and in such cases, a reversal of the burden of proof would be key, so that the onus is put instead on the company to prove that it did conduct reasonable due diligence"[20].

In short, although the many benefits of this soon-to-be new Directive are undeniable, it feels that it is a missed opportunity to address many of the practical barriers to transnational human rights litigation as, directly concerning the aim of this paper, it remains left to the claimants the extremely hard effort to prove in court the company's breach of its duties and the causal link between this and the harm suffered.

In any case, the discussion about this Proposed Directive is still on-going, giving us hope that the final text will change in order to ensure a fair distribution of the burden of proof, namely by encompassing solutions closer to our proposal as described above.

6) Conclusion:

As was recently highlighted by the EU Fundamental Rights Agency, Member States' rules on the burden of proof constitute a major barrier in the types of cases object of this paper, and disclosure – the obligation to release company documents in a legal dispute – either does not exist in most European legal systems or is available in only a limited way.[21]

The difficulties faced by parties and courts when assessing the causal link in environmental liability are an acquired fact due to many complex factors such as multicausality, continued pollution and cross border damages.

Even though these questions weren't properly addressed by the European Liability Directive or, to a lesser extent, by the Lugano Convention, they must not be relegated to oblivion, since they constitute key factors to a successful protection of environment and individual victims in particular.

Taking namely into account the contributions provided by other legal systems, we propose that European

[20] Cavazzini, Anna, *Proposal for a Directive…*

[21] European Union Agency for Fundamental Rights, *Business and human rights – access to remedy*, October 2020 (Opinion 1). Available at: https://fra. europa.eu/en/publication/2020/business-human-rights-remedies

legislation on environmental civil liability shall admit a lessening of the requirements necessary for proving the causal link, namely through the acceptance of causal presumptions based on plausible factors, the lowering of the standard of proof, and the admissibility of scientifical statistical evidence. Finally, when various operators are found liable, we propose a joint and several liability scheme.

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