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ABHANDLUNG

Liability for environmental damage and insurance coverage under German law

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Abstract "Protection of the environment" and "sustainability" are more significant than ever. The legal system contributes an important share to the protection of the environment. However, an overview of the German private environmental liability law shows that conventional tort law is not a suitable basis for civil liability for the environmental consequences of officially approved emissions of greenhouse gases. In general, one of the main problems of private environmental liability law lies in proving the individual causality of the conduct of an emitter, as the lawsuit of a Peruvian homeowner against a German energy company pending before the Higher Regional Court of Hamm illustratively demonstrates. The outcome of this lawsuit, which may have an outstanding significance for the status and development of private environmental liability law in Germany, is awaited with great anticipation. The article also briefly examines recent developments in private environmental liability law outside Germany and the question to what extent insurance can be an instrument to protect the environment.

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Haftung für Umweltschäden und Versicherungsschutz nach deutschem Recht

Zusammenfassung "Umweltschutz und Nachhaltigkeit" sind bedeutender denn je. Auch die Rechtsordnung erbringt einen wichtigen Beitrag für den Umweltschutz. Ein Überblick über das deutsche Umwelthaftungsrecht zeigt allerdings, dass das traditionelle Deliktsrecht keine taugliche Grundlage für eine zivilrechtliche Haftung für die Umweltfolgen behördlich genehmigter Emissionen von Treibhausgasen ist. Generell liegt eines der Hauptprobleme des privaten Umwelthaftungsrechts im Nachweis der individuellen Kausalität des Verhaltens eines Emittenten, wie illustrativ der vor dem OLG Hamm anhängige Rechtsstreit eines peruanischen Hauseigentümers gegen ein deutsches Energieunternehmen zeigt. Der Ausgang dieses Prozesses, der für Stand und Entwicklung des privaten Umwelthaftungsrechts in Deutschland eine herausragende Bedeutung haben kann, wird mit großer Spannung erwartet. Der Beitrag beleuchtet kursorisch auch neuere Entwicklungen der privatrechtlichen Umwelthaftung außerhalb Deutschlands sowie die Frage, inwieweit Versicherung ein Instrument des Umweltschutzes sein kann.

1 Introduction

"Protection of the environment" and "sustainability" have become highly topical on a global scale. In early 2019, the German Government even established a so-called "climate cabinet".[1] The topic has an impact on the economy as the annual meetings of the World Economic Forum in 2018 and 2019 show. And this topic is also increasingly affecting civil society. The young Swede Greta Thunberg, for example, has recently sparked the "Fridays for Future" student demonstrations in almost all parts of the world.

1.1 Protection of the environment

Protection of the environment is a high-priority topic in Vietnam and Eastern Asia, as well. The *Bangkok Declaration on Combating Marine Debris in ASEAN Region*, signed in June 2019[2], is a current example. Environmental pollution from plastic waste is also a major problem for Vietnam.

The vulnerability of the environment—and the need to protect it—is determined by many factors that vary from country to country. First and foremost, there are natural and geographical circumstances. Thus, in terms of the environmental element of water, we cannot compare a high-mountain region like Switzerland with a country like Vietnam with its more than 3000 km of coastline. In addition, infrastructural, social, demographic, cultural and institutional factors are relevant when it comes

[1] See https://www.bundesregierung.de/breg-de/suche/bundesregierung-packt-klimaschutz-an-1592188.

[2] See https://asean.org/bangkok-declaration-combating-marine-debris-asean-region/.

to the reasons for pollution as well as possible measures against it.[3] As a result, most areas of environmental protection cannot be tackled with a worldwide patent solution, but rather with solutions that differ from region to region. However, the over-all aim, viz. to maintain the viability of our planet, must be pursued worldwide.

Let us be aware: The world does not so much have a problem of knowledge with regard to environmental protection. Politics and science are aware, at least in parts, of the human-driven harmful impacts on the environment and of the overly high consumption of resources. Sources of information are available for everyone worldwide.

This means we are not dealing with a problem of knowledge, but rather with a multitude of implementation problems. It is a question of changing the behaviour patterns of governments, enterprises and the entire population with respect to necessary environmental policy objectives.

1.2 Sustainability

Protecting the environment requires measures that have a sustainable effect. When we speak about sustainability in our environmental context, it is interesting to note that the concept of sustainability originates in forestry. It describes the principle of not cutting down more trees than will grow again in a given time span.[4]

Sustainability has become a core objective of modern politics. In 2018, the German Government published the *German National Strategy for Sustainable Development*. Based on the *UN Agenda 2030 for Sustainable Development*, it defines 17 global objectives (*Sustainable Development Goals, SDGs*). This includes the protection of climate and environment as well as other goals like fighting poverty, securing pension schemes, and peacekeeping.

It is to be welcomed that the *United Nations* has set itself sustainability objectives and established a *High-Level Political Forum (HLPF)* to monitor their implementation. HLPF is open to all member states and by the year 2018, 46 countries (including Germany) have presented national implementation reports (*Voluntary National Reviews, VNRs*). Hopefully, in future more countries will follow and reinforce the idea of sustainability with their own national progress reports.

Speaking before the *UN Sustainability Forum* in 2016, a Parliamentary State Secretary of the German Federal Ministry for the Environment explained the important role of sustainability for the protection of the environment by saying that "if everyone in the world lived like the Germans, we would need three planets. This shows that staying on the beaten track is not an option. We have to change our lifestyles so that they respect our planet's ecological breaking point. The sustainability goals offer huge opportunities for global environmental protection."[5]

[3] Cf. Special Report of the Intergovernmental Panel on Climate Change (IPCC), *Management of the Risk of Extreme Events and Disasters to Promote Adaption to Climate Change,* p. 5, see https://www.de-ipcc.de/128.php.

[4] Encyclopedia entry: Nachhaltigkeit (sustainability), in Duden, Deutsches Universalwörterbuch, 4th edition, Mannheim 2001.

[5] See https://www.iwr.de/news.php?id=31698.

Sustainability should in fact be a maxim for human conduct in most situations and areas of life. For politicians, sustainability is an important criterion for getting the general public to accept measures that are felt unpleasant or detrimental. Politicians have to raise and foster the understanding that these measures need to have long-term effects, bearing responsibility for future generations. In many areas, a successful enforcement of sustainable measures to protect the environment will not be possible against the will of the population, but only with its consent and compliance. For the current generation, cross-generational environmental measures often mean renouncement: For example, we have to renounce consuming resources, we have to renounce assets (because the state regulates resource consumption by way of taxes and levies), and we have to renounce opportunities for economic development in favour of the environment (because economic development is burdened with costs for protection measures). For this reason, the current generation will only comply with environmental measures enforced by governments once they have been informed and convinced of the necessity of such measures. This is not an easy task. At present, however, it seems that in some countries it is not the state having to convince its citizens to act more quickly and efficiently but rather the other way round.

Notwithstanding the priority of environmental protection, it is necessary to strike a balance between environmental protection, economic development and social prosperity. Without financial strength, countries will not be willing—and often not be in a position—to protect the environment. This was demonstrated at the EU summit held in Brussels in June 2019: Germany, France and most other member states wanted to pass legislation for EU-wide climate neutrality by the year 2050. However, this ambitious plan failed due to the resistance of Poland, Hungary, the Czech Republic and Estonia—all of them considering themselves economically unable to withdraw from oil, coal and gas that quickly.

1.3 Environmental legislation

This leads us to considering the significance of legislation. Protecting the environment will not work with voluntary change in behaviour. Environmental legislation—like all legislation—is about regulating behaviour by way of mandatory legal norms, i.e., through legal commandments and prohibitions, and, if they are not complied with, through sanctions enforced by the state.

In environmental law, like in all other areas of law, legislation and jurisprudence must adhere to the constitutional principles. It should be emphasized that since 1994 Art. 20a German Constitution (*Grundgesetz, GG*) obliges the state to protect its natural livelihood and animals for future generations. However, how far this constitutional obligation will determine ordinarily legislation remains a subject for further exploration by the *German Federal Constitutional Court (Bundesverfassungsgericht)*.

In any case, environmental legislation must be reasonable, practicable and efficient in order to contribute significantly to the protection of the environment. Any legal practitioner, be it a judge or a civil servant, an attorney, or—like me—a professor of law, will have asked himself every now and then whether it would not be

wiser to tackle current real-life problems, instead of working on the law with its abstractness and reference to the past. But law shapes the future and environmental law shapes our future environment. To contribute to this is a noble aim.

A lot remains to be done in terms of further developing environmental legislation. With this in mind, a group of renowned international legal experts drew up the *Oslo Principles on Global Climate Change Obligations* (2015)[6] and the *Oslo Principles on Climate Obligations of Enterprises* (2017)[7] to provide legal support for the further development of environmental law.

2 Environmental liability law

2.1 Systematic basis

Environmental law is a cross-cutting subject with different areas of public and private law. In Germany, efforts to eliminate this legal fragmentation through a comprehensive Environmental Code have not been successful, so far.[8]

The German Environmental Damage Prevention and Remediation Act (*Gesetz über die Vermeidung und Sanierung von Umweltschäden—Umweltschadensgesetz*) being public law as well as the entire private environmental liability law deal with the compensation of environmental damage. This term covers all damage caused via the so-called environmental paths, i.e., via air, water or soil.[9] It therefore covers all violations of legal interests typically protected by tort law, but also damage to the environment as such, so-called ecological damage (the environment being a collective legal interest).

The first priority in environmental liability law is the compensation of damage. However, it also serves to prevent damage beforehand by threatening liability and granting injunctive reliefs. This function of loss prevention should not be underestimated. In many cases, the threat of liability will cause the norm addressees to obey the law and, thus, avoid damage.

2.2 Distinction between private environmental liability law and public environmental damage law

Environmental liability under private law is complemented by environmental damage law under public law. In Germany, the latter includes the *Environmental Damage Prevention and Remediation Act* (*Gesetz über die Vermeidung und Sanierung von Umweltschäden—Umweltschadensgesetz*) from 2007, which is based on an EU

[6] See https://globaljustice.yale.edu/oslo-principles-global-climate-change-obligations.

[7] See https://climateprinciplesforenterprises.org/resources/ (21.10.2020).

[8] See the overview of the German Federal Environment Agency (*Umweltbundesamt*) at https://www.umweltbundesamt.de/themen/nachhaltigkeit-strategien-internationales/umweltrecht/bessere-umweltrechtsetzung/umweltgesetzbuch#textpart-1.

[9] Cf. Sect. 3 subsect. 1 German Environmental Liability Act (*Umwelthaftungsgesetz*).

directive[10], and the *Federal Soil Protection Act (Gesetz zum Schutz vor schädlichen Bodenveränderungen und zur Sanierung von Altlasten—Bundes-Bodenschutzgesetz)* from 1998. Public environmental liability law deals with legally defined damages to the collective environment (damage to biological species, natural habitats, waters and soil). Public law restitution schemes primarily focus on precautionary and restoring obligations ("ecocentric approach"). Only public authorities are entitled to claim. This does not necessarily exclude a reflex protection of individual interests. For example, a public law remediation obligation, in particular with regard to soil, also benefits the respective landowner.

3 Overview of the German private environmental liability law

3.1 Synopsis

German private environmental liability law is based on a variety of special strict liability regimes, on fault-based tort liability under the German Civil Code (*Bürgerliches Gesetzbuch, BGB*), supplemented by no-fault claims for injunctive reliefs, and finally on specific *Aufopferungsansprüchen* (i.e., claims to compensation following infringement of property rights suffered in the course of legal state actions, in particular under the so-called environmental neighbour law).

3.2 Environmental Liability Act and other strict liability regimes

3.2.1 Environmental liability act

According to Sect. 1 German Environmental Liability Act (*Umwelthaftungsgesetz*) of 1991, the owner of a license-requiring facility is liable without fault if the facility causes personal injuries or property damage as a result of an environmental impact (*Umwelteinwirkung*). Since an amendment of Sect. 253 BGB in 2002, non-material damage is also compensated by strict liability.

The typical limitations of strict liability apply. Thus, there is no claim if the damage was caused by force majeure, and there is a maximum limit of liability.

However, there are several rules applying specifically to environmental damage. Thus, Sect. 6 of the Environmental Liability Act contains the refutable presumption of causality if a facility is not run in accordance with regulations and is therefore, under the circumstances of the individual case, suitable of causing the incurred loss. However, this presumption of causality does not apply, if according to the circumstances of the individual case a circumstance other than the facility in question is also suitable of causing the damage (Sect. 7 Environmental Liability Act).

Sect. 16 Environment Liability Act contains an exceptional extension of *in rem* restitutions (compared to the general rules of the BGB) for parts of the collective environmental damage (so-called ecological *in rem* restitution [*ökologische Natu-*

[10] Directive 2004/35/EC of 21.4.2004 on environmental liablity with regard to the prevention and remedying of environmental damage, OJ EU L 143/56 of 30.4.2004.

ralrestitution]). If the property damage also constitutes damage to nature or the landscape, measures to remedy the damage by way of *in rem* restitution are not disproportionate in the meaning of Sect. 251 subsect. 2 BGB solely because they exceed the value of the property.

Enforcement by the damaged party is facilitated by information claims against the owner of the facility that is suspected to have caused the damage, and against public authorities that have licensed or surveilled the facility, or that are assigned to monitor its environmental impact. *Vice versa*, the owner of a facility against which a claim is asserted under the Environmental Liability Act may request information from the damaged party, from the owner of other facilities, and from the public authorities referred to in Sect. 9 of the Act.

The owners of certain facilities[11] must hold a compulsory cover for damage defined by the Environmental Liability Act. This compulsory cover is usually provided by insurance cover.

3.2.2 Other strict liabilities regimes

Additionally, other strict liability regimes apply, notably the Atomic Energy Act (*Atomgesetz*), the Genetic Engineering Act (*Gentechnikgesetz*) and the Water Resources Act (*Wasserhaushaltsgesetz*). Those strict liability regimes exist parallel to general tort liability, with the exception of the strict liability according to the Atomic Energy Act, which is exclusive.

3.3 Fault-based liability under the German Civil Code (BGB)

a. Sect. 823 subsect. 1 German Civil Code (*Bürgerliches Gesetzbuch, BGB*), as the most important claim for fault-based liabilities, is limited to specific legal interests (*Rechtsgüter*) and absolute "other rights". In principle, environmental assets do not qualify as "other rights" within the meaning of this provision.
b. The liability caused by violation of a protective provision (*Schutzgesetz*), as stated in Sect. 823 subsect. 2 BGB, is particularly significant in practice because in parts, environmental and pollution regulations are recognized as "protective" within the meaning of this provision. Examples include Sect. 2 subsect. 1 Regulation for the Protection of Bees (*Bienenschutzverordnung*), Sect. 10 subsect. 4 Waste Management and Product Recycling Act (*Kreislaufwirtschaftsgesetz*) and Sect. 22 subsect. 1 No. 1 Federal Emission Control Act (*Bundes-Immissionsschutzgesetz, BImSchG*) insofar as these provisions have a neighbor-protecting character. It is, however, controversial whether specific provisions of the public Environmental Damage Act are of respective protective character, as well. At first glance, the fact that the Environmental Damage Act is part of public law speaks against this classification. On the other hand, according to Sect. 10 Environmental Damage Act private individuals as affected parties can also claim that the authorities take action against the originator of an environmental damage they suffered. In the end, however, the

[11] Cf. Annex 2 Environmental Liability Act.

fact that the ecological protection purpose of the Environmental Damage Act explicitly excludes individual interests speaks against its character as a protective provision within the meaning of Sect. 823 subsect. 2 BGB.

c. Surprisingly, the diesel emission scandal involving *Volkswagen* has added another regulation to environmentally relevant tort law: Sect. 826 BGB, the regulation concerning intentional damage contrary to public policy (*sittenwidrige Schädigung*). German Higher Regional Courts have affirmed that it is an act of willful immoral damage to put on the market a vehicle containing a shutdown device, which is impermissible because it conflicts with type-approval regulations. This applies to the exhaust reduction turn-off device used in Volkswagen Diesel vehicles. What is remarkable about Sect. 826 BGB is the fact that this regulation includes compensation for purely financial loss. A decision of the Higher Regional Court (*Oberlandesgericht*) Koblenz points out the strong environmental aspect of the Volkswagen diesel emission scandal, which it takes into account when evaluating the possible violation of moral principles (*gute Sitten*). The judgment says:

"The defendant's conduct was also detrimental to the environment, since the actual NOx emissions of the vehicles were higher than the values determined in the type-approval procedure because of the shutdown device used. This is a particularly reprehensible violation not only of general interests but also of elementary individual interests. [...] Individuals can contribute to environmental protection by purchasing products that are as environmentally friendly as possible. This is what the claimant [i.e., the buyer] comprehensibly invoked. In the overall view, it presents itself as an element of immorality to undermine this endeavour of the individual through a deliberate deception. It is particularly reprehensible to make individuals believe that they are contributing to environmental protection more positively than others, while exactly the opposite is the case."[12]

3.4 Strict liability claims for removal and injunctive reliefs in the BGB

The environmental liability law is supplemented by the so-called environmental neighbour law. It is based on specific strict liability claims for removal and injunctive reliefs against (unlawful) intolerable detriments (Sect. 906 ff., 1004 BGB). However, Sect. 906 BGB only applies when the damage occurs between two neighbouring properties, whereas Sect. 1004 BGB does not require a neighbourhood situation. In any case, both provisions require proof of individual causation, as will be discussed later.

The established case law of the German Supreme Court (*Bundesgerichtshof, BGH*) points out that, analogously to Sect. 906 subsect. 2 sentence 2 BGB, an affected neighbour who does not have to tolerate an unlawful interference is entitled to financial compensation, even if he would have been entitled according to

[12] OLG Koblenz, judgment of 12.6.2019—5 U 1318/18—, juris. Confirmed by BGH *Versicherungsrecht (VersR)* 2020 pp. 988 ff.

Sect. 1004 subsect. 1 BGB, but could not fend off the interference (in due time) for factual reasons.[13]

3.5 *Aufopferungsansprüche* arising from lawful conduct

According to Sect. 906 subsect. 2 sentence 2 BGB, the owner of a property can demand a reasonable compensation in money from the operator of another property when he has to suffer an influx of gases, vapours, smells, smoke, soot, heat, noise, vibrations and similar effects emanating from said property, provided that the exposure impairs the customary local use of his property or its yield beyond what is reasonable.

The claim for damages, as regulated in Sect. 14 sentence 2 Federal Immission Control Act (*Bundes-Immissionsschutzgesetz, BImSchG*), is another part of the private neighbour law.[14] In cases of emissions that have been approved in accordance with the BImSchG, however, a claim for cessation of operation is ruled out by Sect. 14 subsect. 2 which merely allows to claim precautionary measures against detrimental effects of the operation. If such precautionary measures are not feasible or economically unjustifiable, only damages can be claimed. It is important to note that both Sect. 14 subsect. 2 BImSchG and Sect. 906 subsect. 2 sentence 2 BGB are applicable only for damages caused locally, i.e. they do not apply to long-distance emissions.

3.6 Claims for compensation based on *negotiorum gestio* and unjust enrichment

Another part of the overall picture of environmental liability law are the general provisions on *negotiorum gestio* and unjust enrichment where the damaged party itself had remedied the impairment it had suffered (so-called "self-remedy"). In principle, an individual who has remedied an impairment on his property himself is entitled to claim for reimbursement of the necessary expenses from a perpetrator (being liable under Sect. 1004 subsect. 1 sentence 1 BGB). This is because he has undertaken the task of the perpetrator or, if the requirements of *negotiorum gestio* cannot be established, that the perpetrator has saved the expenses arising from his obligation to repair the damage and is, thus, unlawfully enriched (Sect. 812 subsect. 1 sentence 1 alt. 2 and Sect. 818 subsect. 2 BGB).[15]

3.7 Limited efficiency of the environmental liability law—an interim summary

According to the hitherto predominant German doctrine, tort law does not provide a suitable basis for civil liability for the consequences of climate change caused by officially approved emissions of greenhouse gases. Tort law claims do not include

[13] BGH, *Entscheidungen in Zivilsachen (BGHZ)* 111, pp. 158 ff.

[14] BGH, *Entscheidungen in Zivilsachen (BGHZ)* 102, 350 (so-called *Waldschaden*-[forest damage]-judgment).

[15] BGH, *Neue Juristische Wochenschrift (NJW)* 2005 pp. 1366.

collective ecological damage. They are limited to compensating personal injuries and damage to property and hence do not include purely financial losses (except for liabilities arising from intentional damage contrary to public policy and the violation of protective provisions [*Schutzgesetze*], which only in very exclusive cases protect against pure financial losses). One of the main problems of private-law environmental liability law is proving the individual causation of an emitter.

4 Causation problems with long-distance emission

According to prevailing doctrine, liability for long-distance emission (i.e., beyond neighbouring properties) fails due to the inability to establish causation. This holds true even if the damage occurred though non-authorized and therefore unlawful emissions.

Sect. 830 subsect. 1 sentence 2 BGB bypasses the causation problem in favour of the damaged party, but traditional restrictive interpretation prevents it from being applied. According to this provision, if it is not possible to determine who caused the damage by his action each participant shall be liable. This, however, only applies under very tight and strict preconditions. Thus, case law requires that each individual causal contribution must be capable of causing the overall loss by itself.[16]

Wagner, one of the leading commentators on German tort law, sums up the causation dilemma concerning climate-related damage as follows: "CO2 is a gas completely harmless to the health of humans, animals and plants and it occurs in high concentrations in the atmosphere. Its harmful consequences for the global climate results solely from the sum of all emissions on this planet as well as from the negative effects of deforestation (trees being important converters of CO2) and from the growth of the world population. It seems neither possible nor reasonable to turn the resulting global risk into tortious duties of care of individual domestic operators of emission sources."[17]

Thus, the matter always concerns a large number of interacting causes (cumulative causation), including the issue of alternative causation, because numerous factors influence each other and sometimes lead to feedback effects—in different terms: long-term, long-distance and cumulative damage.[18] Therefore, the individual evidence of causation necessary under German environmental liability law fails according to hitherto prevailing doctrine.

It should be added that under German law, a claimant must bear the full burden of proof for the causation between the infringing act and the infringement of the legal interest (Sect. 286 Code of Civil Procedure [*Zivilprozessordnung, ZPO*]). A pure

[16] BGH, *Entscheidungen in Zivilsachen (BGHZ)* 67 pp. 14 ff. (p. 18); BGH *Neue Juristische Wochenschrift (NJW)* 1996 pp. 3205 ff. (p. 3207).

[17] Wagner in *Münchener Kommentar zum BGB*, vol. 6, 7th ed. (Munich, 2017) Sect. 823 BGB para. 893.

[18] Chatzinerantzis/Appel, Haftung für den Klimawandel, *Neue Juristische Wochenschrift (NJW)* 2019 pp. 881 f.

probability judgement based on estimation according to Sect. 287 ZPO is in this respect inadmissible according to settled case law.[19]

However, this traditional interpretation of tort law is increasingly viewed critically. The argument is that now relatively unassailable scientific findings on the causal link between anthropogenic CO2 emission and global temperature rise are available, and that therefore a proof of causation according to Sect. 286 ZPO should be possible.[20]

At present, a court case that a Peruvian house owner is pursuing with the support of the NGO *Germanwatch* before the Court of Appeal Hamm is attracting international attention.[21] Here are the facts and the status of the proceedings:

The Peruvian citizen *Saul Lliuya* is co-owner of a residential building in a town in Peru situated at the foot of a mountain range. Below a glacier at an altitude of 4562 meters, there is a flat lake where melt water and rain water gather. The water is dammed by way of a natural moraine that consists of glacial drift. In the late 1930s, the lake contained 10 to 12 million cubic meters of water. In 1941, a glacial avalanche triggered by an earthquake went into the lake and large parts of the town were flooded. In 2009, the water volume of the lake had risen to 17.3 million cubic meters. Technical measures were used to bring down the water level in the following years, but by February 2016, it again rose to 17.4 million cubic meters.

The claimant *Lliuya* now fears that a renewed glacial avalanche into the lake will lead to his house being flooded. He has brought declaratory action against the energy company *RWE AG (Rheinisch-Westfälische Elektrizitätswerke)* before a German court, claiming that *RWE AG* should account for 0.47% of the protective measures that have already been undertaken to protect his property from a glacial flooding (0.47% being *RWE's* share in the world-wide emission of greenhouse gases).[22] He argued that the melting of the glacier is largely caused by human-made (anthropogenic) climate change, and that the defendant's specific share in the causation can be calculated and measured with scientific models. The claimant holds the view that there is a legal causation between the flood risk and the greenhouse emission of the defendant. The defendant denies causation in a legal sense and, in particular, defends itself by the fact that the emissions had been approved by German authorities.

The first instance, the District Court (*Landgericht*) Essen, dismissed the action as unfounded for lack of sufficient evidence of causation. The court denied a claim for reimbursement of expenses pursuant to Secc. 683, 670, 677 BGB or Secc. 684, 812 subsect. 1 BGB due to the lack of interference within the meaning of Sect. 1004 BGB.[23]

[19] Cf. BGH, *Versicherungsrecht (VersR)* 2019 pp. 694 ff.

[20] Fausten, Globale Erwärmung und Haftpflichtversicherung—die Suche nach einem neuen Haftungssubjekt, *Haftpflicht international—Recht und Versicherung* (Phi) 2019 pp. 42 ff. (p. 50).

[21] OLG Hamm, judgment of 30.11.2017—I-5 U 15/17—, juris; cf. Ahrens, Außervertragliche Haftung wegen der Emission genehmigter Treibhausgase?, *Versicherungsrecht (VersR)* 2019 pp. 645 ff.

[22] Corresponding to the Carbon Majors Report, cf. Richard Heede, Carbon Majors: Accounting for carbon and methane emissions 1854–2010—*Methods & Results Report 2013* p. 20, http://www.climateaccountability.org/carbonmajors.html.

[23] LG Essen, *Neue Zeitschrift für Verwaltungsrecht (NVwZ)* 2017 pp. 734 ff.

For many authors, the Higher Regional Court Hamm as the Court of Appeal surprisingly issued an order on 30 November 2017 to establish the disputed causation.[24] It has ordered an expert evidence on the individual elements in the causation chain and, in particular, on the defendant company's share in the pollution. In its reasoning for the order, the court clarifies that according to the legal system even a person acting lawfully is responsible for causing damage to property of others. In Germany, the outcome of the trial is eagerly awaited because of its outstanding importance for the status and the further development of private environmental liability law.

5 Private environmental liability outside Germany

In the US, the case of *Kivalina v. ExxonMobil*—which is comparable to the German case *Lliuya v. RWE*—has gained major publicity. The town of *Kivilina* in North-Western Alaska had filed a lawsuit against *Exxon Mobil Corp*. and other oil, coal and energy companies for reimbursement for resettlement costs. Resettlement had become necessary because the offshore ice layer had been reduced as a result of global warming. The lower courts dismissed the action as unjustifiable. This dismissal became final as the US Supreme Court did not accept the case in 2013.[25]

In the meantime, a second wave of actions has started in the US in 2017, mainly before State Courts in California. Many Californian local authorities are suing international companies for the consequences of greenhouse gas emissions. In 2018, some of these lawsuits were dismissed, again with the argument that the disputes were politically motivated and unjustified. However, numerous lawsuits are still pending and at present, one can only speculate about their outcome. It can, however, be stated that the claimants in the proceedings still pending are asserting a large number of claims parallel to product liability law.

Databases of *Columbia Law School*[26] provide an overview of all lawsuits pending in the US—separated by types of action—as well as of non-US climate change litigation. According to this survey, there are currently 977 registered lawsuits within and 275 outside the US dealing with climate change. Similar lawsuits are pending in the Netherlands[27], Brazil, the Philippines and Australia.

It is well known that international lawsuits with cross-border elements face considerable hurdles, particularly the question of international jurisdiction. Increasingly though, it looks like these hurdles can be overcome, particularly because parent companies can be sued at their headquarters.[28]

[24] OLG Hamm, judgment of 30.11.2017—I-5 U 15/17—, juris.

[25] Native Village of Kivalina v. Exon Mobil Corp et al., 2013 WL 798854 (U.S. 2013).

[26] See http://climatecasechart.com/us-climate-change-litigation/.

[27] Milieudefensie et al. v. Royal Dutch Shell plc, see http://climatecasechart.com/non-us-case/milieudefensie-et-al-v-royal-dutch-shell-plc/; cf. also the successful Urgenda action against the Netherlands, State Gerechtshof Den Haag, judgment of 09.10.2018, 200.178.245/01 (English translation) see https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:GHDHA:2018:2610, para. 34 ff.

[28] UK Supreme Court 10.4.2019, Vendanta Resource plc and another v. Lunowe and others to Art. 4 Brussels Ia Regulation (jurisdiction of English courts affirmed, farmers from Zambia claiming against the

6 Insurance cover as an instrument to protect the environment

6.1 Facts on insurance cover for natural disasters

According to estimates of the reinsurance company *Munich Re*[29], natural disasters caused global losses of 160 billion US$ in 2018. This is above the inflation-adjusted average for the past 30 years, although it did not reach the extreme loss amount of 350 billion US$ for 2017, which was mainly due to hurricane losses. The single largest loss in 2018 was caused by the forest fire (so-called "Camp Fire") in California amounting to 16.5 billion US$. According to *Munich Re*, about half of the total worldwide losses were insured.

Climate change—both natural and human-driven—and its effects influence the exposure of insurance companies in many areas.[30] This involves coverage of natural disasters and property as well as coverage for personal injuries, such as casualties from heat waves or other natural disasters.

The focus of this article, however, should not be on the changing framework conditions of the insurance industry but rather on the question to what extent insurance coverage can be an instrument to protect the environment.

6.2 Availability of financial resources to repair or mitigate environmental damage

Natural disasters often have existential consequences for those being affected. Many of those lose all their belongings. In cases of major man-made damage such as dam bursts, chemical or oil spills, the party liable for the damage can be identified. However, without insurance coverage, liability has no economic value since in most cases the liable party has no assets to compensate for the enormous losses involved. In these cases, liability insurance coverage particularly represents protection for the damaged third party.

At the same time, liability insurance coverage also protects the liable party by allowing it to continue his economic activity even after having caused a major loss. This is also in the general interest as insolvencies are prevented and the economy will not be affected.

The payments provided by private insurers also prevent the state from having to use taxpayers' money to compensate for damage. By saving taxpayer's money, it avoids the need to change planned political priorities. This prevents political allocation conflicts that are often fought at the expense of the environment.

Overall, it can be said that claims payments by the insurance industry indirectly attribute to protecting the environment in many ways. They provide the financial means to repair or mitigate environmental damage.

English parent company for environmental pollution by copper mines), cf. *Haftpflicht international—Recht und Versicherung* (Phi) 2019 pp. 114 ff.

[29] See http://www.finanztreff.de/news/munich-re-katastrophenschaeden-2018-ueberdurchschnittlich-hoch/15030607.

[30] Cf. the study by the British Insurance Supervisory Authority from 2015, *The impact of climate change on the UK insurance sector*, see https://www.preventionweb.net/publications/view/46330.

6.3 Compulsory insurances for environmental damage

Due to the advantages of insurance coverage with regard to environmental damage, German environmental protection liability law typically provides for an obligation to take out liability insurance or other financial security.

Some countries, such as France with its *Assurance Catastrophes Naturelles*, provide for a general compulsory insurance for natural disasters. The *Assurance Catastrophes Naturelles* includes "property damage not directly insurable which was caused by disproportionally strong natural forces, and the occurrence of which could either not have been prevented by usual safety measures, or these safety measures could not have been taken."[31] The obligation to pay insurance money depends on the government declaring an official state of emergency for the respective department or municipality.

The appropriateness of compulsory insurance for environmental liability risks is widely acknowledged. However, in terms of legal policy, compulsory coverage for personal losses, such as damage to buildings due to natural disasters, is doubtful because it might lead the insured to neglecting risk avoidance and risk prevention in light of the compulsory insurance cover.

6.4 Loss prevention through insurers' risk management

In addition to the important function of financial loss compensation, insurance companies, especially reinsurance companies, play an important role in loss prevention through risk management. Reinsurers have long had significant data collections on the changing causes of natural disasters. *MunichRe*, for example, has been collecting information on all relevant natural disasters since 1950 in their *NatCatService* database that was established in 1980.[32] This database not only serves insurers in underwriting, particularly in premium calculation, but also provides a basis for investigating causes and effects of climate change and for preventive measures.

6.5 Green financing

Insurers are known to be investors with enormous financial capacity. As such, German primary insurers and reinsurers are committed to their responsibility for environmental protection. They have issued, therefore, internal guidelines for responsible investments. In particular, insurance industry supports the change towards a low-carbon economy (key word: "green financing") through this investment policy.

The German Insurance Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin*) explicitly requests all supervised companies to consider current and future environmental, social and governance risks in their risk and

[31] Art. L 125-1 subsect. 3 French Insurance Act.

[32] See https://www.munichre.com/de/reinsurance/business/non-life/natcatservice/index.html.

strategic management in order to contribute to an efficient allocation of capital in the transformation process towards a sustainable economy.[33]

7 Conclusion

Civil law, in particular private liability law, turned out sufficiently flexible to deal with new technology and new liability scenarios, in the past. Liability law will also continue to develop with regard to new challenges posed by environmental damage. Particularly in this area, the insurance industry has a significant protective function.

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[33] See https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Fachartikel/2018/fa_bj_1805_nachhaltige_Finanzwirtschaft.html.