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Climate Change and Sea Level Rise - German Law and the Kivalina Case

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1. Kivalina – Civil Liability for Climate Change?

The Kivalina Case deals with a small village on a barrier reef on Alaska`s northwest coast that is disappearing allegedly due to melting glaciers and rising water levels. The village of Kivalina is seeking damages from 24 of the biggest US oil and power companies for their alleged contribution to global warming, which the village describes as “a nuisance that is causing severe harm to Kivalina”. In a ruling dated Sept. 30, 2009 the Federal District Court of Northern California dismissed the case on political question and standing grounds.² Kivalina has appealed.³ The case is expected to finally be resolved by going to the US Supreme Court⁴.

Kivalina is only one example of a growing danger to low coastal regions and islands caused by sea-level rise. In Germany for instance a recent study financed by the German Ministry of Research and Technology predicts for the Bay of Heligoland a sea-level rise of about 70 cm by 2050. A total of 40 cm of the expected rising water level are attributed to the increasing volume of water due to higher water temperatures and melting glaciers, 15 cm of the balance is due to a diminishing friction of incoming water and waves and 15 cm to geophysical reasons.⁵

Because of the rising water level the risk of flooding will increase by four to ten times for the endangered regions in the Bay of Heligoland.⁶ The protective level of the existing dike system for the land behind the dikes will accordingly diminish by a factor of five to ten. The result is that market value of real estate in this area will go down and insurance rates will go up, if in fact the insurance companies will grant coverage any longer.⁷ The costs to maintain the present protective level of the dike system for the Bay of Heligoland are estimated up to 380 Million Euro.⁸

A case like Kivalina which deals with the legal responsibility of power plants and other purported contributors to climate change has not yet been brought before the German Courts. The following paper summarizes an analysis by the author that deals with the question, if such a claim could be based on § 1004 of the German Civil Code (BGB) ruling:

¹ The article is based on a presentation in an International Workshop, 29 June 2010, at Maastricht University, Faculty of Law, Netherlands. A comprehensive version in German is published in NJOZ 2010, 2296 = NJW 2010, 3691.

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² US District Court of the Northern District of California, Oakland Div. Case: 08-cv-01138-SBA Doc. 194, filed 09/30/09.

³ US Court of Appeals for the Ninth Circuit, No. 09-17490.

⁴ SZ/NYT Supplement 8. 2. 10, p. 4.

⁵ Schirmer, Klimawandel und Küste, 2005, p. 51.

⁶ Zimmermann, Liebermann, Mai in Schirmer (footnote 5), p. 145.

⁷ Luhmann, Wuppertal Institut für Klima, Umwelt und Energie, FAZ. 11/18/2004, p. 7.

⁸ Liebermann, Grabemann, Müller, Osterkamp in Schirmer (footnote 5), p. 230.

“(1) If ownership is interfered with, in other ways as by deprivation or retention of possession⁹, the owner can demand the abatement of the nuisance by the one responsible for the nuisance.

(2) This claim is excluded if the owner is obliged to tolerate the nuisance.”

2. “Distant and additive damages”

Authors are sceptical about the possibility of establishing civil liability in climate change cases primarily due to doubt about the causal link between CO₂ (and other green-house gas) emissions and a specific damage or nuisance caused by climate change.¹⁰

It is argued, that there are so many contributors and highly complex influences on climate and weather that it is impossible to single out a specific causal relation between CO₂-emissions of a certain defendant and the specific negative effects of these emissions at a distinct place. In the Kivalina Case the US District Court for the Northern District of California denied the plaintiff’s “standing” because of doubts of this nature.¹¹

In German legal theory a case like the Kivalina-Case would be discussed in the framework of “distant and additive damages” (“Distanz – und Summationsschäden”).¹² Cases of this nature give rise to questions with respect to causation, scope of liability and proof.

2.1 Causation

According to German legal theory causality is to be determined by the “conditio sine qua non rule”.¹³ The relevant question thereunder is: “Would there be no or less sea-level rise without the defendant’s emissions of CO₂?” If this question can be answered with “yes”, causality is to be affirmed.

The problem regarding determination of causality in “distant and additive damage cases” is to be seen in the fact, that there are multiple activities of a great number of separate and independent agents all contributing somehow to the final damage or nuisance. The mere possibility of having participated in causing the damage or nuisance is not sufficient to establish individual liability. Two questions with respect to the “conditio sine qua non rule” therefore are to be tackled in cases of this sort: Can there be established an “individual” causal chain? And to what extent can the participation of a defendant in causing the damage be separately attributed to this defendant?

⁹ The protection against deprivation or retention of possession is regulated in § 859 and § 985 BGB.

¹⁰ Chatzinerantzis/Herz, Climate Change Litigation, NJOZ 2010, 594 = NJW 2010, 910; Stewart/Willard, Kivalina dismissed, in Munich Re, 2010, p. 13.

¹¹ US District Court of Northern District of California (footnote 3), p.19 et seqq.

¹² For a comprehensive survey of legal aspects with respect to „distant and additive damages in German Law Theory see Staudinger/Kohler, BGB, 2002, Introduction to Liability for Environmental Damages, no. 141 et seqq..

¹³ Palandt/Grüneberg, BGB, 69th. ed. (2010), § 249 preliminary remarks no. 69; „conditio sine qua non“ = „condition without which no (damages)“.

For analysing causality in cases of this nature a distinction can be made between defendants belonging to “closed” or “open” groups: In an “open” group case it can not be excluded, that someone (but not necessarily everyone) in the respective group has not contributed to the damage or nuisance and that this may be the defendant.¹⁴ On the other hand in a “closed” group case everybody belonging to the group necessarily takes part in causing (part of) the damage or nuisance and consequently can be held liable. “Closed” in this sense does not mean, that the membership of the group can not change, but whoever belongs to the respective group cannot argue, that he is possibly not contributing to the respective problem. In cases of this nature everybody contributing to the damage can be held responsible for his part in causing the damage.¹⁵

If all CO₂-emissions, wherever they come from, go into the atmosphere and increase there the concentration of green-house gases causing thereby global warming, then everybody emitting CO₂ belongs to a “closed” group and can not argue, that he is possibly not contributing to global warming and its effects. If furthermore without global warming there would be no or less melting of glaciers, no or less expansion of oceans because of rising water temperatures and consequently no or less sea-level rise, a causal chain fulfilling the “*conditio sine qua non* rule” between the emission of CO₂ (cause) by a certain defendant (may he be in the US or in Germany) and sea-level rise (effect) due to global warming (wherever it takes place) can be regarded as established: So much of the sea-level rise can be attributed to every defendant as sea-level rise at the respective place have been or would be lower without his emissions of CO₂ (or other green-house gases) by this defendant.¹⁶

However in order to limit the scope of the wide definition of causality according to the “*conditio sine qua non* rule”, under German Law the additional criterion of “adequacy” however has to be fulfilled: A defendant will not be held liable for consequences of his activities, that are beyond reasonable foreseeability.¹⁷ Taking into account today`s knowledge about climate change, its reasons and effects, the possible causation of sea-level rise by CO₂-emissions can be held to be within the scope of “adequacy”.

2.2 Proving causality

According to the general rule in the German Law of Civil Procedure the plaintiff has the burden of proof for the facts, on which his claim is based. In a case of “additive damages” it may be difficult to prove the facts relevant for determining the exact amount of a damage that can be attributed to a particular defendant or as in the case of Kivalina to a certain group responsible for causing (only) a certain part of the problem. Therefore the question is, to what extent the plaintiff must prove facts relevant for the scope of a defendant`s liability.

¹⁴ As example for his type of cases may be cited the „Waldschadensfall“ („forest damage case“) decided by the German Federal Court of Appeals (BGH) BGHZ 102, 350 (352 seqq.). In this case the claim of an owner of forrest for compensation for damage caused by acid rain induced by sulphor dioxide emissions of power plants was denied.

¹⁵ Staudinger/Kohler, BGB, 2002, Introduction to Liability for Environmental Damages, no.192.

¹⁶ Sea-level rise due to global warming is different from many other phenomena (like hurricans, droughts, floodings) also linked with climate change, where – up to now – it can not be excluded (as to the „*conditio sine qua non*“ rule) that they would not have happened without climate change.

¹⁷ Palandt/Grüneberg, l.c. (Footnote 10).

German Law of Civil Procedure distinguishes between facts on which the liability of the defendant is founded (“haftungsbegründende Tatsachen”) and facts, that are relevant for determining the scope of the claim (“haftungsausfüllende Tatsachen”).¹⁸

Facts to support the claim have to be proven as to § 286 of the German Civil Procedure Code (ZPO) beyond any reasonable doubt.¹⁹ The proof of facts, by which the scope of the claim is determined, does not have to meet this high standard of proof. If the scope of damage is disputed, the court has to be given (only) relevant indications allowing the court as to § 287 ZPO to estimate the amount of the damage or nuisance that can be attributed to the contribution of the defendant.²⁰ This rule applies also in additive damage cases. The court can estimate - with the help of experts - the respective contribution of each cause contributing to the damage or nuisance.²¹

Accordingly in a case like Kivalina the plaintiff can satisfy his burden of proof, if he can prove the general causal link between the emission of CO₂ and the sea-level rise (see above 2.1). It may be mentioned in this context, that as to a recent US study approximately 97 to 98 per cent of scientists publishing regularly in the field of climate change agree, that anthropologic greenhouse-gases, such as CO₂, are principally responsible for most of the global warming. On the basis of these “consolidated” findings a German Court might conclude, that the existence of a causal link between CO₂-emissions and sea-level rise can be regarded as proven beyond “any reasonable doubt”. Such a proof does not require, that all possible doubt can be excluded. The standard is a degree of certainty that meets the requirements of “real” life.²²

2.3 Scope of liability

Under German Law being a defendant in an “additive damages” case does not mean, that each defendant may be held jointly and severally liable for all of the damage. As to the general rule each contributor in a nuisance case is liable only for so much of the nuisance, as can be attributed to his part in causing the nuisance.²³

Of course this rule limits the scope of liability of the individual defendant considerably – but only seems to be fair with respect to every defendants limited contribution to a nuisance caused by many actors. Practically speaking small emitters of CO₂ will be removed from liability because of their minute contribution to climate change.²⁴ For large emitters like fossil fuel operated power plants the liability can be significant with respect to the quantities of CO₂-emissions and the size of the nuisance caused by sea-level rise in many places.

¹⁸ Baumbach/Lauterbach/Albers/Hartmann, ZPO, 68th ed. (2007) § 287 no. 6f; Jauernig, Zivilprozessrecht, 29th ed. (2007), p. 161.

¹⁹ Jauernig (footnote 15), p. 158.

²⁰ Federal Court of Appeals (BGH) in BGHZ 66, 75; Baumbach/Lauterbach/Albers/Hartmann (footnote 15), § 287 no.10.

²¹ Baumbach/Lauterbach/Albers/Hartmann (footnote 17), § 287 no. 20; Staudinger/Kohler (footnote13), no.181.

²² Federal Court of Appeals in BGHZ 53, 245, 255.

²³ Palandt/Sprau (footnote 11), §830 no. 13; Palandt/Bassenge (Footnote 11), § 1004 no.17.

²⁴ Staudinger/Kohler (footnote 15), no. 179 f.

But a modification of the burden of proof rule (as stated above under 2.1) must be mentioned: In a case, where a nuisance is caused by several actors, the burden of proof partially shifts. In an effort to limit his liability the defendant has to deliver and prove the facts (such as time and quantity of emissions) that allow the court to make - if needed with the help of experts - a reasonable estimation to what extent the plaintiff may be held *not* responsible.²⁵

3. Sea-Level Rise as nuisance

Nuisance (“Eigentumsstörung”) in § 1004 BGB is generally defined as “a state of order or a course of events contrary to the substance of the affected property right”.²⁶ There must not be an actual damage to the property to constitute a nuisance.²⁷ The German Federal Court of Appeals (BGH) recently ruled that loitering outside a building may interfere with a landlord’s right to let his property (at a reasonable price) and can be treated as a nuisance.²⁸

Applying these standard to the decline of the level of protection of real estate in coastal regions by sea-level rise (e.g. making it more difficult if not impossible to lease, sell or insure the endangered land the projected sea-level rise can certainly be qualified as nuisance in the sense of § 1004 BGB.

It may be further mentioned that it is not relevant “how” the nuisance is caused. The encroachment on the property of somebody else without authority is regarded as such as being against the law (“rechtswidrig”).²⁹

This conclusion for the German Law conforms with the ruling in the Kivalina case: The court of first instance did not question at all that global warming and its detrimental effects for the safety of Kivalina constitutes a nuisance for Kivalina.

4. Who has to pay?

The fact that a nuisance exists does not mean necessarily that someone can be held responsible for it. According to German legal theory there are two types of nuisance that meet the conditions of responsibility: Somebody may be held responsible either as “Zustandsstörer” or as “Handlungsstörer”.³⁰

A “Zustandsstörer” can be held responsible, because he has the controlling power over an object, which is in a state constituting a nuisance, if the nuisance is at least indirectly caused by him.³¹

²⁵ Palandt/Sprau (footnote 11), § 830 no. 7.

²⁶ Federal Court of Appeals in NJW 2007, 432.

²⁷ Staudinger/Gursky, BGB, 2006, § 1004, no. 49 ff; Wolf/Wellenhofer, Sachenrecht, 25th ed. (2010), §24, no. 4.

²⁸ Federal Court of Appeals in BGHZ 144, 200 (202).

²⁹ Bauer/Stürner, Sachenrecht, 18th ed. (2009), § 12 no. 8; Wolf/Wellenhofer (footnote 27), §24 no. 25.

³⁰ Palandt/Bassenge, BGB, 69th ed, (2010), § 1004 no.16, 19.

³¹ Palandt/Bassenge (Footnote 18), § 1004 no.19.

A “Handlungsstörer” is somebody who either causes a nuisance directly or causes it indirectly but “adequately”, meaning that the respective causal link must not be beyond reasonable probability.³²

On this basis fossil operated power plants emitting CO₂ may be regarded as “Handlungsstörer” with respect to the sea-level rise resulting in the insecurity of coastal real estate.

5. Remedies, Regulations and “Political question”

What are the remedies accorded by §1004 sec. 1 BGB in cases of nuisance? Can a business be held responsible at all if it is licensed and operating within regulatory limits for emissions? In order to answer this question, the interaction of § 1004 BGB, the general rule protecting against nuisance, and the special rule with respect to the protection against nuisance caused by emissions as laid down in § 906 BGB and § 14 of the German Law of Protection against Immissions (BImSchG), has to be discussed:

§ 1004 does not differentiate with respect to the specific source of a nuisance. According to this basic rule of protection against nuisance the plaintiff can demand:

- abatement of the actual nuisance (§ 1004 sec. 1, sentence 1 BGB) and
- omission of further nuisances (§ 1004 sec.1, sentence 2 BGB).

These remedies are granted unless the claim is precluded by §1004 sec.2 BGB, because the plaintiff is “bound to tolerate” the nuisance. Such a preclusion may have its basis in the above cited legal rules of § 906 BGB and § 14 BImSchG.

§ 906 BGB is the general rule limiting the protection against negative effects caused by emissions.³³ § 14 BImSchG limits claims based on nuisance with respect to immissions originating from the operation of plants licensed by a government agency.³⁴

³² Palandt/Bassenge (Footnote 18), § 1004 no.17f.

³³ § 906 BGB: „(1) The owner of real estate may not prohibit the introduction of gases, steam, smell, smoke, soot, warmth, noise, vibrations and similar influences emanating from another plot of land to the extent that the influence does not interfere with the use of his real estate or interferes with it only to an insignificant extent. The nuisance is normally to be regarded as insignificant if the limits or targets laid down in statutes or statutory orders are complied with. The same applies with respect to limits and targets laid down in administrative orders under § 48 BImSchG.

(2) The same applies insofar as a significant nuisance is caused by the use of a plot of land that is common in the region and can not be prevented by financially reasonable measures. If the owner of the affected land accordingly has to tolerate the nuisance, he may require from the user of the other landowner reasonable monetary compensation, if the respective nuisance impairs the normal use or revenues of his real estate unacceptably.“

³⁴ § 14 BImSchG: „The owner of real estate suffering nuisance caused by emissions from a neighbouring plant cannot demand the stoppage of his plant, if it is licensed by an incontestable administrative act; he can only demand precautionary measures, which prevent the nuisance. If such precautionary measures are technically unfeasible or economically unreasonable, the affected owner can claim monetary compensation.“

Both provisions limit the right to demand the stoppage of emissions or the closing of a plant causing a nuisance, but they do not totally preclude defence and recovery. Basically they provide that, when the nuisance is “essential” (a qualification that can obviously be attributed to sea level rise in the expected scale) for two remedies. Even if the emissions are within regulated limits and are caused by a licensed plant the plaintiff can demand:

- either protective measures to shield his property against the emissions (§ 906 sec.2, sentence 1 BGB, § 14 sentence 2 BImSchG)
- or monetary compensation, if protective measures are technically or economically not feasible (§ 906 sec. 2, sentence 2 BGB; §14 sentence 2 BImSchG).

However § 906 BGB (impliedly) and § 14 BImSchG (expressly) only refer to nuisance caused by emissions to real estate in the neighbourhood of the emitting source³⁵. They do not apply directly to “long distance” effects of emissions.

From the special rules for “short distance” cases it does not follow, that the protection in “long distance” cases is thereby impliedly excluded. On the contrary: § 906 BGB and § 14 BImSchG only modify the remedies under § 1004 BGB for “short distance” nuisance by emissions. As special rules concerning the protective standards between real estate in a neighbouring relation to they do not set aside the general protection against nuisance.

Furthermore it is well established “case law” by the German courts that § 906 sec. 2, sentence 2 BGB and § 14 sentence 2 BImSchG awarding civil law compensation for a private sacrifice (“privatrechtlicher Aufopferungsanspruch”), if the normal protection against a nuisance has to step back, embody a general principle:³⁶ This principle applies by analogy in “common” nuisance cases, when a plaintiff is prevented to enforce his rights of protection against a nuisance under § 1004 sec.2 BGB because the nuisance cannot be made undone or has to be born because of overriding public interests. Accordingly the German Federal Court of Appeals awarded compensation in a case, where a landlord was bared to enforce the removal of a power supply line crossing his plot of land because of overriding public interests.³⁷

To sum up:

Under § 1004 sec.1, sentence 1 BGB the plaintiff can in a “long distance “ case demand primarily the abatement of the nuisance and he can - if the abatement of the nuisance “at its source” is not possible - ask for suitable measures protecting against the nuisance.

If protective measures to ensure the given standard of protection (for example by fortifying the dike-system against flooding) are not possible, the plaintiff can – analogous to § 906 sec.2 sentence 2 BGB and § 14 sentence 2 BImSchG - demand adequate monetary compensation.³⁸

³⁵ Palandt/Bassenge (Footnote 18), § 906 n.1.

³⁶ Federal Court of Appeals in BGHZ 144, 200 (205 f.)

³⁷ Federal Court of Appeals in BGHZ 60, 119 (123).

³⁸ It may be noted, that this interpretation of the respective rules conforms with the Article 14 of the German Constitution (Grundgesetz) , the protection of private property: the mere distance between the source of a nuisance and the affected real estate can reasonably make no difference for the application of § 1004 BGB.

In the above cited decision the German Federal Court of Appeals (BGH) also dealt with the “political question” argument, one of the two aspects on which the Court of First Instance in the Kivalina Case based its dismissal. The BGH argued that there are no “rechtstaatliche” (constitutional) objections to grant compensation, when the plaintiff’s claim for abatement of a nuisance has to give way to general public interests.³⁹

6. Liability in the Global Village

Liability for nuisance by sea-level rise due to CO₂-emissions (and other green-house gases) does not end on national borders.

According to the EU-harmonized rules of Conflict of Laws (VO (EG) Nr. 864/2007) and International Civil Procedural Law (VO (EG) Nr.44/2001) a plaintiff can establish his claim in cases referring to environmental nuisance either on the Law of the “Handlungsort”, the place, where the act causing the nuisance is done, or the Law of the “Erfolgsort”, the place, where the nuisance occurs (VO 8 (EG) no. 864/2007 Art 7 and Art 4 sec.1). The plaintiff has the same choice with respect to the court where he pleads (VO /EG) Nr.44/2001 Art 5 no. 3).

7. Conclusions

The main hurdles to establish “climate-liability” in a case like Kivalina seem to be connected in the US law system with the proof of causality and the political question doctrine. In German law the scope of the general rule of protection against nuisance caused by distant emitters in a “closed group” scenario has yet to be decided.

Liability under German Law for sea-level rise due to climate change as laid down in this analysis complies with the principle of prevention in environmental law. If protective measures are not feasible, monetary compensation can make up for the “special sacrifice” of owners of coastal real estate particularly exposed to sea-level rise. Civil law liability of those who cause sea-level rise can contribute to an adequate cost allocation of climate change and promote technologies not causing climate change.

Civil liability in climate change cases certainly cannot substitute the process to migrate and mitigate climate change by international agreements - but it can support and complement this process by making those who cause climate change pay.

List of references and abbreviations:

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³⁹ Federal Court of Appeals in BGHZ 144, 200 (206).

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BGHZ = Official Publication of Civil Law Decisions of the Federal Court of Appeals (volume, page).

FAZ = Frankfurter Allgemeine Zeitung (date, page).

NJOZ = Neue Juristische Online Zeitung (date, page).

NJW = Neue Juristische Wochenschrift (date, page).

SZ/NYT = Süddeutsche Zeitung/New York Times Supplement (date page).

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