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**28.11.2016**  
14/0354Z/R/rv

**2 O 285/15**

In the case

**Lliuya**

Counsel for Lliuya: RAe Günther

v

**RWE AG**

Counsel for RWE AG: RAe Freshfields

Following the oral proceedings on 24.11.2016, the plaintiff makes a brief supplementary statement on the matter of causation dealt with therein and in the statement of the defendant of 15.11.2016 also, and a proposal for an order for evidence.

1.

The plaintiff believes that it is possible to prove that the defendant, as “disturber” as defined in section 1004 German Civil Code (*Bürgerliches Gesetzbuch (hereinafter “BGB”)*), is responsible for the impairment of the plaintiff’s property without “interminable interpretation” of the statute (thus stated by the defendant in its statement of 15.11.2016, page 8).

First of all, it is necessary to note that there is no statutory definition of the circumstances in which there is causation which establishes liability and, therefore, this is incapable of being determined in advance, but must be assessed in the individual case.

The academic articles and excerpts from commentaries presented by the defendant in Exhibits BR1 to BR 9 on the subject of cumulative/summative causation and the question of the “necessary condition” in such cases primarily demonstrate that - contrary to what the defendant alleges - there is no established or consolidated case law which negates an attribution of liability in the event of cumulative damage of the type in the present case. This is shown by the fact that one of the most respected commentaries on civil law contains the following citation (on section 906) (Staudinger/Roth (2009). section 906, margin no. 278):

“If the impairments of several emitters are each in themselves insignificant (e.g. Oldenburg Higher Regional Court (OLG), AgrarR 1975, 258), but they become significant because of their combined effects or if they, in their combined effects, go beyond the degree that is reasonable under section 906 (2), forbearance may be required of each emitter until insignificance or reasonableness is attained.”

This also merely appears to contradict the references in the literature cited by the defendant and also judgments in the individual cases.

The commentator has concerned himself here with claims to injunction, but there is no absolute reason why this should not also apply to claims to abatement. In legal theory, these are a “preliminary stage” of claims to abatement, if the injunctive relief is not granted (cf. Federal Court of Justice (*Bundesgerichtshof* (hereinafter “*BGH*”)), judgment of 1 February 2008, case no. V ZR 47/07 - juris). With regard to attribution, the same applies, therefore, to both forms of the right to protection with regard to causation.

2.

A dismissal of the complaint on the basis of a lack of causal relations without considering the results of evidence-taking is only possible, as the plaintiff sees it, if the court sets up the following legal principle:

“Even if it is scientifically proven that the emissions of the defendant have contributed towards the shrinking of the glacier and to the risk of flooding and, therefore, to an impairment as defined in section 1004 (1) BGB, these emissions are not the cause in the legal sense. Causation in the legal sense is missing either because

- a) the processes in the Peruvian Andes and in the area of the Lake Palcacocha are natural processes for which no legal responsibility exists and/or
- b) the emissions of the defendant mix indistinguishably with emissions of other greenhouse gases and there is a lack of an individually attributable causal relationship between the emissions of the defendant and the consequences for the plaintiff and/or
- c) the emissions of the defendant do not represent any necessary condition for the risk of flooding.

From the plaintiff’s point of view, this legal principle is indefensible and/or at least does not lead to a just result in this individual case.

Re a):

This qualification is not given. In response to the inquiry as to whether the processes in the Peruvian Andes (shrinking of glaciers, increase in volume and swelling of glacial lakes) and the risk of floods originating from glaciers are “natural processes” or effects of the forces of Nature, the expert witness Prof. Mojib Latif would state as follows:

“No. The glacial meltdown is a direct consequence of global warming which is mainly caused by humans through the emission of greenhouse gases and of CO<sub>2</sub> in particular. The Intergovernmental Panel on Climate Change (IPCC) established in its last Assessment Report dated 2013 that the human influence on the climatic system is obvious.”

Re b):

The opinion of the defendant on the linearity or the “individually determinable causal relations” leads at this point to the following result: even if it is scientifically, i.e. factually, proven that the emissions of the defendant [mainly] contribute towards a certain consequence, there is no liability because a “conversion process” takes place in Nature between the emissions of the defendant (and other emitters). We object to this by saying: No “conversion process” that interrupts causation takes place in the CO<sub>2</sub> emissions of the defendant. Instead these emissions remain in a measurable scale in the atmosphere and, on the whole, cause a higher density of the greenhouse-gas molecules which accumulate there.

i)

It has been pleaded in the oral proceedings that the “forest-damage judgment” (*Waldschadensurteil*) of the BGH contains no fundamental decision for the link between greenhouse-gas emissions and climatic consequences.

The taking of evidence would show that a comparison between the effects of greenhouse gases with the distribution and effects of SO<sub>2</sub> and other air pollutants is inadmissible - already from a scientific point of view. In the case in question, - other than with the cumulative cause of the greenhouse effect - it was namely not able to be proven that the emissions of the specific industrial plants did in fact have an impact on the specific forest in question there. These emissions could have rained down previously or not reached the damage location because of the distance. There was no case, therefore, of the “absolute” accumulation as in the present case in dispute.

If Prof. Mojib Latif were to be heard as an expert witness, he would state the following:

“Comparing the effects of CO<sub>2</sub> and SO<sub>2</sub> or aerosols on the climate is not admissible. This would be tantamount to comparing apples with oranges. These are processes of wholly different physical, chemical and biological natures.”

ii)

As regards “linearity”, the scientific answer is: as already pleaded in detail, CO<sub>2</sub> emissions do not only have an effect in situ, but distribute themselves in the atmosphere and cause, by their nature (according to the law of the even distribution of gaseous molecules in the air), a higher density of greenhouse gases in the atmosphere overall. It is necessary to distinguish between the following four stages of the chain of causation.

- The CO<sub>2</sub> emitted by the power stations of the defendant [partially] rises up into the atmosphere.
- The molecules rising up into the atmosphere cause, by reason of the thermodynamic law of the even distribution of gaseous molecules in the air, a corresponding increase in the density of the GHG molecules throughout the whole atmosphere.
- The resulting overall increased density of the GHG molecules in the atmosphere has the consequence of lower heat dissipation and an increase in global temperature.
- The increase in global temperature also leads to an increase in the temperature in the region of the P-glacier and to an increased meltdown.

Even if a proportion of the molecules emitted were absorbed by depressions or by the oceans, this would merely give rise to the question as to what proportion of the emissions affects the climate, but not whether emissions have any impact whatsoever. This is thus not a question of the causation establishing liability but of the causation determining the type and scope of compensation. This is also already confirmed by Prof. Mojib Latif in Exhibit K 31.

iii)

On the requirement of the “individual nature” of the causal contribution:

The plaintiff believes that there is a misunderstanding with regard to this requirement. Whether there is an “individual nature” in the case of accumulated damages, depends on whether individual “contributory causers” can object that their contribution is possibly not a contributory cause. This was the position in the “forest-damage case”.

In the case of greenhouse-gas emissions, all emitters on the other hand are necessarily, by reason of laws of physics, contributory causers to global warming and its consequences. For emissions of greenhouse gases, there is accordingly a “closed” group of causers (in the sense that individual

emitters may not be possibly eliminated from the group of contributory causers), in the case of which, therefore, each contributory causer, depending on the amount of its “individual” contribution, (necessarily) implies a causal consequence also in the legal sense.

Re c):

On the requirement to set a major or necessary condition:

i)

The emissions of the defendant are *de facto* major. Exhibit K 31 contains statements by expert witnesses on this matter. The cumulative CO<sub>2</sub> emissions of the defendant during the 20th and early 21st centuries are not inconsiderable.

If the emissions of the defendant were considered in the sense of the “*conditio sine qua non*” formula, the density of the greenhouse-gas molecules in the atmosphere would be lower, the rise in temperature would be lower accordingly, the glacier above Lake Palcacocha would have shrunk to a lesser extent accordingly and the risk to the land of the plaintiff would be less dramatic - even if merely on a calculatory basis.

The plaintiff is certainly not claiming in the main applications that the defendant should be jointly and severally liable in accordance with section 830 (1) sentence 2 according to the principles of liability for “cumulative causation”. For the case in question here, reference is made to Staudinger/Eberl-Borges, 2008, section 830, margin no. 69. If we look at the case structures decided by German case law, it becomes apparent that this criterion is primarily intended to exclude joint and several liability in the event of insignificant contributions to the “act”. Since, in the present case, the liability of a disturber is only being claimed in accordance with the contribution to causation, there is no need to apply the “legal” and evaluative case law on causation in order to limit liability.

ii)

This has been expressly recognised by other supreme courts, e.g. in the United Kingdom, and Australia, specifically for medical law:

In the case *Bonnington Castings Ltd v Wardlaw* [1956] AC 613, [1956] UKHL 1, the highest civil court of Great Britain (House of Lords) found that it sufficed, in cases of cumulative cause, to prove that the defendant made a “*material contribution*” to the negative consequence, i.e. a major (more than *de minimis*), but not a necessary, condition.

In a judgment from the year 1991 (*March v E & MH Stramare Pty Ltd* (1991) 171 CLR 506), the High Court of Australia decided that the “*causa sine qua non* test” had never been, and could never be, the sole and exclusive test for the assessment of causation:

“In truth, the application of the test proves to be either inadequate or troublesome in various situations in which there are multiple acts or events leading to the plaintiff’s injury: see, e.g., *Chapman v Hearse*, *Baker v Willoughby* [1970] AC 467; *McGhee v National Coal Board*; *M’Kew* (to which I shall shortly refer in some detail). The cases demonstrate the lesson of experience, namely, that the test, applied as an exclusive criterion of causation, yields unacceptable results and that the results which it yields must be tempered by the making of value judgments and the infusion of policy considerations.”

Generally the issue of whether a causal connection can be established in law cannot be assessed without taking evidence.

3.

In response to the statements by the defendant, we shall briefly deal with the legal issue of whether liability is avoided because of the high number of emitters.

There is no “legal rule of the large number” such that responsibility is avoided depending on the number of causers of damage from a certain point onwards. Where is this point to lie? In the present case, it is a matter of the responsibility of a distinguishable number of power-station operators for “external costs” of energy generation, i.e. not a question of claiming against all “minor emitters”.

Finally, it is noted that the plaintiff has offered or provided evidence of the causation establishing liability. As regards the query to this effect, also with regard to the pleading of the defendant, as to whether it is correct that the emissions of the defendant RWE AG make a positive contribution to glacial meltdown worldwide and in the Peruvian Andes, i.e. contribute towards an increase in temperature, and that there are possibly scientific uncertainties with regard only to the extent of the contribution, but not to its fundamental existence, the expert witness Prof. Latif would answer as follows:

“Yes. Anthropogenic CO<sub>2</sub>, i.e. emitted by humans, has a retention time of approx. 100 years in the atmosphere. For this reason, it spreads worldwide. Thus we find a similarly fast rise in the level of CO<sub>2</sub> even in the Antarctic as anywhere else in the world, even though no CO<sub>2</sub> whatsoever is emitted in the Antarctic.

The cumulative emissions can be determined for individual countries or even for individual emitters and they are a measure of the historical responsibility for global warming.”

4.

In summary, it is suggested that the court resolve, with the decision of 15.12.16, an order to the effect that evidence will be taken as to whether

- a) the historical CO<sub>2</sub> emissions released by the power stations of the defendant are included in quantifiable volume in the total volume of the greenhouse gases present in the atmosphere,
- b) the greenhouse-gas emissions included in the total volume, in accordance with the thermodynamic laws of the even distribution of gaseous molecules in the air, are the cause of a correspondingly higher density of greenhouse gases (GHG) in the atmosphere,
- c) there is a (linear) causal connection between the density of the GHG molecules in the atmosphere and the rise in global temperature of such a nature that a higher density of the GHG emissions results in lower global heat dissipation and, as a consequence thereof, an increase in global temperature,
- d) that the rise in temperature is a major cause of the glacial meltdown in the area around Lake Palcacocha and, therefore, of the increased volume of water in the lake and of the risk to the plaintiff’s land emanating from the same.

Lawyer

**Dr. Roda Verheyen**