

Protection of the Environment in Roman Law?

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I. INTRODUCTION

1. Today, we are increasingly sensitive to problems of the environment. We know that our resources are limited and that we have to be particularly sparing in the use of energy. Water threatens to become scarce in some parts of the world. The fear that wars may break out among peoples over water is not unrealistic. Already today, at least a billion people are living without clean drinking water.¹ Therefore the protection of the

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This paper was intended to be read at the Roman Law Conference organized by Michael Hoeflich in Kansas, August 2000, where I unfortunately was unable to attend. From Europe I send my best wishes to the new founded Roman Law Society, hoping that its new journal will flourish. – The paper is a summary of my broader German article: “Umweltschutz im römischen Recht?” to appear in the review *Orbis Iuris Romani* [OIR], edited by Peter Blaho and others (Brno/Trnava) vol. 7 (2001). I am grateful to my law-student Anne-Marie Löwe (Köln/Karlsruhe and London) for her important help in translating the main parts of my German text into English.

General Literature: Andrea Di Porto, *La tutela della “salubritas” fra editto e giurisprudenza* I (Milano 1989), originally published as: *Bullettino dell’Istituto di Diritto Romano* (3rd ser. 30/31, 1988/89), more or less critically reviewed by Alberto Burdese, “Tutela privatistica dell’ambiente e diritto romano,” *Rivista di Diritto Civile* 35 II (Padova 1989) 505–511; Bertold Kupisch, *Iura: Rivista Internazionale di Diritto Romano* 41 (“1990,” actually 1993) 138–139; Hans Wieling, *Gnomon: Kritische Zeitschrift für die gesamte klassische Altertumswissenschaft* 64 (München 1992) 645–646; Francesco Musumeci, “Tutela dell’ambiente e diritto romano,” *Index: Quaderni camerti di studi romanistici* 20 (Napoli 1992) 564–574 (including an especially detailed exegesis). Renate Fischer, *Umweltschützende Bestimmungen im römischen Recht* (Aachen 1996, Shaker Verlag, originally Diss. iur. Augsburg, directed by Wilhelm Simshäuser), reviewed by Francesca Lamberti, “Principio responsabilità a Roma?,” *Labeo* 45 (Napoli 1999)

environment is of great importance, including the use of law as a means thereto. Environmental law is the main instrument for realising environmental politics; the overall term includes all law whose objective is the protection of natural resources and which aims to prevent harmful influences on the environment. Land, air and water belong to the natural prerequisites of life. According to the leading anthropocentric theory these environmental elements must be protected in the interest of life, health, and the well-being of mankind. On the other hand, it is not possible to protect ecosystems by law purely for their own sake, as is attempted by the opposing ecocentric theory. Our whole legal system is anthropocentric; *omne ius hominis causa constitutum est*. To assign legal rights to nature itself would in the end mean giving nature the ability to be a carrier of legal rights. However, the *summa divisio* that exists between a carrier of rights and the object of rights cannot be overcome.

Australia's animal rights protectors recently succeeded in pushing through the equalization of great apes (such as chimpanzees, gorillas, and orang-utans). Under the state's constitution, these are now equal with human beings. This achievement, celebrated as a great success by the Green Party, is an illusion, however, as the anthropoids are unable to comprehend the human rights that officially have been assigned to them. Although they are biologically related to humans, legally the two are miles apart.

The regulation of § 90a,² that was introduced into our BGB ten years ago, is a similar curiosity.³ Thereafter, animals are to

128–131 (containing further bibliography on environmental conditions in Antiquity). — Independent of my present research, Rena van den Bergh considers related problems in her article “Roman origins of environmental law?” *TSAR, Tydskrif vir die Suid-Afrikaanse Reg* 1999 (3), 495–507. Most recently see Magdalena Sitek, “Legal protection of the natural environment in... Roman Law,” in Maria Zablock et al. (edd.), *Au-delà des frontières, Mélanges de droit romain offertes à Witold Wolodkiewicz II* (Varsovie, Liber, 2000) 859–881.

¹ Report on a world-wide conference held in Den Haag, *Frankfurter Allgemeine Zeitung*, 22. March 2000 Nr. 69, page 7.

² BGB § 90a (1990): “Animals are not things. They are to be protected by special laws. Rules governing things are to be applied to animals accordingly, as far as there is not ordered anything else.”

³ Rightly criticized by Jauernig, *Bürgerliches Gesetzbuch* (9. ed. 1999) ad § 90a, with further literature.

be protected by special laws. However, laws for the protection of animals had already existed for decades — even without this purely declamatory phrase. “Animals are not things,” states § 90a BGB explicitly; nonetheless, “laws governing things [are] to be applied [to animals] accordingly.” And ownership of animals still exists as before (§ 903 sentence 2, new version);⁴ therefore, being objects of rights, they can never be carriers of rights nor subjects of duties. Furthermore, horses are very different from insects; bugs and microbes are harmful rather than useful. Taken in the whole, this is nothing more than bare symbolic legislation, which in substance orders nothing new.

2. The media report almost daily about natural catastrophes. Of course, such catastrophes already threatened human life during antiquity. The most spectacular was the eruption of the volcano Vesuvius in 79 AD, which buried the cities Pompeii and Herculaneum. As we know today, human interference was partly responsible for some of these catastrophes.⁵ In the second century BC, Italy and Sicily were still covered by large leafy forests. According to the report of Lucretius (94–55 BC), however, these forests were already in his day receding further up the mountains. Clearing forests to gain land for growing crops and raising livestock was one of the causes of deforestation. Another cause was felling trees to build houses and ships, as well as using wood for the hypocaust heating systems of houses and thermal baths.

The Romans were once called “the Americans of Ancient times.” This comparison is fitting, due to the Romans’ excellent engineering technology — but also due to their generous wasting of energy. Deforestation of large areas caused erosion. Topsoil was washed away, thus swamps formed in the lowlands and at the mouths of rivers. The hills could no longer hold the rain water, which led to floods. Some regions have been unable to recover from these clearances during the ensuing two thousand years. On the coasts of Dalmatia, for instance, which

⁴ BGB § 903 sentence 2 (1990): “The owner of an animal when exercising his rights has to observe the special rules protecting animals.”

⁵ Generally on problems of the environment in Antiquity: Karl-Wilhelm Weeber, *Smog über Attica: Umweltverhalten im Altertum* (Reinbek bei Hamburg 1993); At. P. Canellopoulos, *Ecologia ed economia dell'ambiente nell'antica Grecia* (Athens 1994, Ekoti Estia) 271 pp. [not consulted].

were reduced to bare rock, the vegetation (apart from a few bushes) has not regrown.

3. Environmental law is only to a small degree part of private law. The main instrument of environmental law is public law, namely building regulations, regulations on the use of land as well as the surveillance of industrial sites. On top of this, there is the environmental criminal law and then the so called eco-tax, as well as public international law and international conventions.

Private law only protects the position of the individual. Out of this, a protection of the environment can only develop as an ancillary function, in so far as an injunction or the fear of having to pay damages can steer the behaviour of potential environmental sinners.⁶ A prerequisite for enforcing an action is that the plaintiff has an interest in doing so: "*Pas d'intérêt, pas d'action*:" individuals not personally involved in the case normally have no cause of action.

Roman law, of course, consists largely of private law. Following from this, not even proper contracts for the benefit of third parties were recognized, due to the lack of an individual interest. Even less so could the collective interest in the avoidance of environmental damage justify granting standing to an individual. On the other hand, Roman law had a wider range of actions that could be brought in the general interest of the people, the *actiones populares*, as well as the interdicts in the common interest, where *quivis ex populo* could intervene as speaker or solicitor for the realisation of common interests.⁷

4. It is possible to differentiate between rural and urban environment, similar to the way in which Roman lawyers differentiated between rural and urban servitudes (*servitutes rusticorum praediorum et urbanorum*: D. 8,1,1; D. 8,2,1 ff.; 8,3,1 ff.). The Romans cherished and enjoyed both city and country life. But only few from the upper classes could afford to

⁶ Medicus, "Zivilrecht und Umweltschutz," *Juristenzeitung* 1986, 778ff.; Meyer-Abich, "Der Schutz der Natur: eine Aufgabe des Zivilrechts?" *Zeitschrift für Rechtspolitik* 1999, 428ff.; Chin-Woo Kim, *Zivilrechtliche Umwelthaftung* (Deutschland-Korea) (Frankfurt 2000).

⁷ Laura Gutiérrez-Masson, "Las acciones populares," in: Javier Paricio (ed.), *Derecho romano de obligaciones, Homenaje J.L. Murga* (Madrid 1994) 739-752, with bibliography.

spend the winter in the city and to move to their villa in the country for the summer.

In the following illustration, we will consider the three environmental elements: air, water and the countryside in turn in respect of their purity.

II. EMISSIONS

Unhealthy, malodorous air (*pestilentia*) could come from certain areas or properties. A *fundus pestilens* was not necessarily unmarketable (cf. for a property of a ward D. 27,9,13 pr.). But according to D. 21,1,49 the purchaser could rescind the contract by means of the *actio redhibitoria*, though apparently only if he was ignorant of this negative characteristic. The bad smell emitting from the plot of land might change through the course of the year. On the other hand, according to D. 50,16,86, *salubritas* falls into the category of characteristics of a plot of land, together with *amplitudo* (size) and *bonitas* (good quality of soil). Healthy air was called *caelum salubre*, literally meaning clean sky, but this expression does not appear in the legal sources. Even suspected persons who were taken into custody could not be shut into complete darkness. They had to have access to light and air.⁸ “*Odor*” denotes a pleasant smell, and was composed of fine scents; as such it was part of the distinguished female toilet, namely perfume.

Industrial businesses produced nasty smells from time to time. A text of the Digest covers the production of smoked cheese, another the fullers’ and tanners’ craft (*fullones*).

1. “*Minturnae*” was the name of a seaport town in *Latium*, south of Rome (about halfway to Naples). This town was situated at the mouth of the river Liri. The place, which Cicero visited from time to time, was situated in an unhealthy and swampy surrounding.⁹ A certain Cerellius Vitalis, according to

⁸ Constantine, Codex Theodosianus 9,3,1 (AD 320). On “Public Health” in general see the good overview by Olivia Robinson, *Ancient Rome: City Planning and Administration* (1992), chapter 8 pp. 111ff.

⁹ Cf. *Der Kleine Pauly* III (1975) 1336 f. s. v. “Minturnae.” Today the name of the river is Garigliano; only the stream coming directly from the spring in the Abruzzi is still called Liri. The town named Traetto in

D. 8,5,8,5, complained about smoke and fumes emitted by a cheese dairy that was situated just below his estate:¹⁰ D. 8,5,8,5 (Ulpianus 17. ad edictum):

Aristo Cerellio Vitali respondit non putare se ex taberna casiaria fumum in superiora aedificia iure immitti posse, nisi ei rei servitutem talem admittit. Idemque ait: et ex superiore in inferiora non aquam, non quid aliud immitti licet: in suo enim alii hactenus facere licet, quatenus nihil in alienum immittat, fumi autem sicut aquae esse immissionem: posse igitur superiorem cum inferiore agere ius illi non esse id ita facere. Alfenus denique scribere ait posse ita agi ius illi non esse in suo lapidem caedere, ut in meum fundum fragmenta cadant. Dicit igitur Aristo eum, qui tabernam casiariam a Minturnensibus conduxit, a superiore prohiberi posse fumum immittere, sed Minturnenses ei ex conducto teneri: agique sic posse dicit cum eo, qui eum fumum immittat, ius ei non esse fumum immittere. Ergo per contrarium agi poterit ius esse fumum immittere: quod et ipsum videtur Aristo probare...

Aristo states in an opinion given to Cerellius Vitalis that he does not think that smoke can [lawfully] be discharged from a cheese shop onto the buildings above it, unless they are subject to a servitude to this effect. He also holds that it is not permissible to discharge water or any other substance from the upper onto the lower property: one is only permitted to carry out operations on his own premises to this extent, that he discharge nothing onto those of another: smoke may be a pollution just as well as water. Thus, the owner of the upper property can bring an action against the owner of the lower, asserting that the latter has no right to act in this way. Alfenus tells us that an action can be brought, alleging that a man does not have the right to hew stone

the Middle Ages, which is silted up today, has been called Minturno again since 1879.

¹⁰ Out of the abundant literature to the following well-known text I quote only Alan Rodgers, *Owners and Neighbours in Roman Law* (1972) 163 ff.; Palma [infra nt. 22]; recently María Carmen Jiménez Salcedo, *El régimen jurídico de las relaciones de vecindad en Derecho romano* (Publicaciones de la Universidad de Córdoba, 1999) 35 ff., 54 ff. See also the n. 11.

on his own land in such a way that broken pieces fall on [the plaintiff's] ground. Hence, Aristo holds that the man who leased a cheese shop from the authorities of Minturnae, can be prevented from discharging smoke by the owner of the building above it, but that the authorities of Minturnae are liable to him on the lease. And in the action against the man who is discharging the smoke he can be alleged to have no right to [do so]. Thus, on the other hand, an action will lie in which [the plaintiff may allege that] he has a right to discharge smoke: this also has Aristo's approval...

This dairy had been leased to a private individual by the town authorities. Cerellius had to bear this olfactory nuisance if he wanted to enjoy the picturesque view of the Mediterranean at the Golf of Gaeta. We can sympathize with him, since our sensitive sense of smell detects waste gas exhausted by a fish-meal factory or sugar beet processing even in the weakest concentrations from several miles away, depending upon the direction of the wind. Likewise, a barbecue on apartment house balcony can spoil the whole neighbourhood's relaxation on the weekend; therefore, according to German case law, grilling "braaivleis" outside of a multiple dwelling is permissible only once per month.

Following the decision of the lawyer Titius Aristo (around 100 AC), no smoke was allowed to permeate into the buildings situated above the cheese factory, unless the affected proprietor had granted a servitude in favour of the dairy. Conversely, one would not be permitted to allow water or other substances seep in from above. On one's own property, one would only be allowed to carry out operations to the extent, that nothing is discharged onto the premises of another. Smoke was said to be like water — a (forbidden) emission. Thus, the owner of the upper property could by way of an *actio negatoria* assert that the cheese-dairy does not have the right to discharge the smoke. Alfen also granted the *actio negatoria* against a quarry owner in order to protect against stone pieces falling onto the plaintiff's land. Finally, should the lessee of the *taberna casearia*, who was confronted with the *actio negatoria*, have to discontinue the production of cheese, then, according to Aristo, he would have a claim against the town authorities arising out of the lease (the *actio conducti*).

This leading case on the law of emissions was treated in the

writings of the 19th century just as often as in the newer literature on Roman law.¹¹ This source of the Digest greatly influenced the regulation of our § 906 BGB.¹²

2. Similarly, foul smells were spread by the tanners' and fullers' craft (*fullones*). They worked with urine, which they got from, amongst other sources, the public toilets *latrinae*.¹³ When the emperor Vespasian demanded a basic fee for the use thereof and taxed them (*urinae vectigal*), his son Titus scolded him, saying it was improper to make a profit from something so dirty. In response, Vespasian held under his nose the coins that were first obtained by this undertaking and asked him, whether the smell bothered him (Sueton, Vespasian 23). The notorious answer *pecunia non olet*, "money does not smell," became as much an idiom¹⁴ as the Italian expression for lavatory "Vespasiani" (in French "Vespasiennes"). The lessees of the public toilets (*foricarii*) were according to D. 22,1,17,5 partly falling behind in paying their tax to the *fiscus*; therefore they had to pay moratory interests. Today, however, after the increasing public bribery scandals, one gains the impression

¹¹ A complete overview is given by J. Michael Rainer, "Immissionen: Zur Entstehungsgeschichte des § 906 BGB," in: *Vestigia Iuris Romani, Festschrift G. Wesener* (Graz 1992) 351–376; additionally, Andreas Thier, "Zwischen actio negatoria und Aufopferungsanspruch: Nachbarliche Regelungskonflikte in der Rechtsprechung des 19./20. Jahrhunderts," in: U. Falk/H. Mohnhaupt (edd.), *Das Bürgerliche Gesetzbuch und seine Richter* (Frankfurt 2000) 407ff.

¹² § 906 [Interference from adjacent land] "(1) The owner of a piece of land is not entitled to prohibit the intrusion of gases, vapors, smells, smoke, soot, heat, noises, shocks and similar interferences emanating from another piece of land to the extent that the interference does not or only immaterially prejudices the use of his piece of land. (2) The same applies in so far as a substantial prejudice is caused by the use of another piece of land in conformity with local custom and it cannot be prevented by measures, the financing of which can be reasonably expected of users of this kind. If by virtue of this, the owner must tolerate an interference, he may demand from the user of the other piece of land an appropriate settlement in money, if by the interference in conformity with local custom the use of, of income from, this piece of land is prejudiced over and above the expected degree. (3) The causing of intrusion though a special conduit is not permissible."

¹³ K. W. Weeber, *Alltag in Rom* (3. ed. 1997) s. v. "Toilette;" Robinson [nt. 8] 119 ff.

¹⁴ Büchmann, *Geflügelte Worte* (31. ed. 1964) 600.

that money sometimes indeed does stink.

In order not to disturb the up-market dwelling areas of ancient Rome with foul smells, an area in the 14th region *trans Tiberim* was according to the city-planning assigned to the tanners.¹⁵ A *responsum* of the republican lawyer Trebatius (1st century BC) deals with the waste water of a rural tannery: D. 39,3,3 pr. (Ulpianus 53. ad edictum):

Apud Trebatium relatatum est eum, in cuius fundo aqua oritur, fullonicas circa fontem instituisse et ex his aquam in fundum vicini immittere coepisse: ait ergo non teneri eum aquae pluviae arcendae actione. Si tamen aquam conrivat vel si spurcam quis immittat, posse eum impediri plerisque placuit.

It is recorded in Trebatius that someone who had a spring on his land established a fuller's shop there and began to cause the water there to flow onto his neighbor's land. [Trebatius] says that he is not liable in an action to ward off rainwater. [However, many authorities accept that] if he channeled the water into one stream or introduced any dirt into it, he can be restrained.

The owner ran a tannery at a spring that was on his premises. According to Trebatius, his neighbour cannot restrain him from channeling waste-water into the stream by way of the action to ward off rainwater, the *actio aquae pluviae arcendae*. Following from D. 39,3,1 pr. this action was concerned with warding off rainwater that falls from the sky (*aqua caelestis*), even if this water was later mixed with other water. A prerequisite is an artificial change on the property situated above, the erection of an *opus manu factum*, due to which it is feared that the water will increasingly damage the property below by flooding.

One may still agree to an *opus manu factum* in the form of erecting a tannery near the spring (although today, one would undoubtedly not be granted planning permission for this). But our neighbour is not interested in warding off the spring water,

¹⁵ Von Petrikovits, "Die Spezialisierung des römischen Handwerkes," in: H. Jankuhn / W. Jansen (edd.), *Das Handwerk in vor- und frühgeschichtlicher Zeit* (Abh. Akademie Göttingen 1981) 70.

instead he wants to prevent the mixing in of foul-smelling waste-water from the tannery. Drawing from the conclusion of the text, in the view of most lawyers, the plaintiff is able to complain about this. But a specific action is not named. An analogy to the action to ward off rainwater (as an *actio utilis*) is discussed in modern writings, but this would seem quite daring. The *actio negatoria*, which was already used by Aristo in the cheese case (adduced as a comparison argument) against the interference of water (above, 1), is more closely related here also (as is the predominant interpretation).

3. These two sources coming from the Digest are pivotal as concerns the protection of privately owned land against industrial emissions. On the other hand, from these cases it quickly becomes apparent how limited private law regulating the relations of neighbours is for achieving an all-round protection of the environment. In the sense of Rudolf von Jhering's "Battle over the Law" (*Kampf ums Recht*), the neighbour who defends himself in court against noxious emissions simultaneously fulfills a social act in the general interest of the public to keep air and water clean. However, this "protection of the environment in private law" only works where two individuals fight over the respective limits of their utilization right. For "where there is no plaintiff, there is no judge," *nemo iudex sine actore*; and civil procedure is based on the two party system.

Protection of the environment in private law fails in particular where both parcels of land in question belong to the polluter, namely the polluting grounds of his business as well as the neighbouring parcel that is impaired. This is also the case where the polluting grounds of a business are so large that no neighbour could say he was being disturbed. If the tanner were to let his waste water sink unpurified into his own land, he would harm the ground water. But no one could have made him accountable for this in ancient Rome. The German water law with its strict liability for polluting ground water was only introduced in 1957.¹⁶

Normally one may presume that no owner will damage his property without reason. The owner of an estate will be intent on passing his property on to his descendants in as good

¹⁶ Gesetz zur Ordnung des Wasserhaushalts (Wasserhaushaltsgesetz), esp. § 22.

conditions as it was left to him by his predecessors. But there is no guarantee for such behaviour. In extreme cases, someone may buy some woodland solely for the sake of the timber; when the price of wood is high, he could relentlessly fell all the trees in order to sell them — and then abandon the plot. The *ius utendi* includes the *ius abutendi*. In the Roman principate, mistreated slaves could complain to the emperor against their masters' abuse of power. But mistreated nature cannot defend itself. Nature would need an ombudsman.

4. Labeo granted the interdict *Quod vi aut clam* against the person responsible for the pollution of a well: D. 43,24,11 pr. (Ulpianus 71. ad edictum):

Is qui in puteum vicini aliquid effuderit, ut hoc facto aquam corrumperet, ait Labeo interdicto quod vi aut clam eum teneri: portio enim agri videtur aqua viva, quemadmodum si quid operis in aqua fecisset.

Someone who pours something into a well so as to pollute the water is, Labeo says, liable under the interdict against force or stealth: fresh water is seen as part of the land, just as if someone had done a work connected with water.

The description of the circumstances does not make clear whether the culprit had purposely polluted the well; at any rate, this was a consequence of his intentional act — the pouring in. The interdict, according to the general interpretation, required an impairment of the soil (*ad ea sola opera pertinere placere, quaecumque fiant in solo*: D. 43,24,7,4). Here then is where the problem lay. It cannot be assumed, contrary to what Di Porto believed, that Labeo was not familiar with this generally accepted restrictive interpretation of the interdict.¹⁷ Rather, the water from the spring that originates on the estate is to be considered as part of the estate: *portio enim agri videtur aqua viva*. This reasoning, formulated in direct speech, seems to originate from Ulpian, who hereby agrees with Labeo (in addition, one would have to insert “*quod verum est*” at the beginning). *Aqua viva* is ground water that continues to flow out: according to D. 43,22,1,4 it stands in contrast to water in

¹⁷ Contra Di Porto see the critical reviews, supra nt.*; in addition especially Iole Fargnoli, *Studi sulla legittimazione attiva all'interdetto “Quod vi aut clam”* (Milano 1998) 109–140.

cisterns, in artificially laid-out basins or fish containers. Lawyers differentiated in this way in relation to the interdict *De fonte*, which guaranteed access to the spring in order to fetch water and for the yearly cleaning and improving. No one may restrain the grantee from these activities by force. Cleaning and improving the spring are part of utilizing the water; since polluted water is not enjoyable, therefore no utilization without cleaning (D. 43,22,2,6 ff.).

It is sensible to restrict the prohibition of forcefully restraining someone from fetching water and cleansing to *aqua viva*. On the other hand, it would not be justified to restrict the prohibition of polluting water to *aqua viva* as well, according to the Labeo extract. Whoever pollutes the rainwater that a neighbour has collected in a cistern by pouring substances into it, would certainly be liable under the interdict *Quod vi aut clam*. Water in cisterns and basins is to be considered as part of the property, even more than water that naturally flows from a spring or a well. Ulpian's reasoning will thus be understood as meaning that "even," or "as well," water from a well is to be regarded as *portio agri*. Hence in my opinion, the interdict is applicable to someone polluting a well, "although" well water can only be considered as part of the ground and soil when using an extensive interpretation.

5. Even today, the poisoning of wells is a serious community-harming crime with severe punishment (§ 319 StGB). Used as a perfidious, despicable act by enemies in times of war, this robs thirsty people of their basis for living. The purposeful pollution of water is therefore according to PS 5,4,13 = D. 47,11,1,1 an *iniuria contra bonos mores*, and as *crimen extraordinarium* it is threatened with capital punishment.¹⁸

III. PROTECTION OF THE FORESTS

One of the environmental destructions caused by mankind during the ancient times was deforestation, as mentioned earlier. The "Waldsterben" (dying of forests) which has been caused by large industrial complexes and the air pollution and acid rain that comes with them, certainly is only a modern

¹⁸ Comprehensively, Kirsten Geissler, *Die öffentliche Wasserversorgung im römischen Recht* (Berlin 1998) 225 ff., 240 ff.

phenomenon. “Waldsterben” is one of the few German words which recently have been adopted by other European languages as a borrowed word. It is said that we Germans have a particularly sentimental relationship to our forests. There are numerous folk songs from the Romantic Period about forests. For approximately two decades now, the government of the Federal Republic of Germany has published a yearly report on the damage to the forests (Waldschadensbericht); recently this term was replaced by the euphemism “report on the condition of the forests (Waldzustandsbericht).”

The protection of the forests, above all the large tropical rain-forests, is of primary concern for any attempt at a world-wide protection of the environment. What first steps the Roman law paved in this respect is thus an important question.

A text from the Digest by Alfen from the early Classics is a helpful interpretational exercise concerning the protection of the forests from deforestation, within the boundaries of a lease of a plot of land. D. 19,2,29 (Alfenus 7. digestorum):

In lege locationis scriptum erat: redemptor silvam ne caedito neve cingito neve deurito neve quem cingere caedere urere sinito. Quaerebatur, utrum redemptor, si quem quid earum rerum facere vidisset, prohibere deberet, an etiam ita silvam custodire, ne quis id facere possit. Respondi verbum “sinere” utramque habere significationem; sed locatorem potius id videri voluisse, ut redemptor non solum, si quem casu vidisset silvam caedere, prohiberet, sed uti curaret et daret operam, ne quis caederet.

In the lease there is the clause: “The lessee of public land shall not fell nor bark nor burn the woodland, nor allow anyone to bark or fell or burn.” Should the lessee stop someone if he saw him doing one of these things, or should he in addition guard the woodland to prevent anyone’s being able to do it? I responded that the word “allow” has both meanings, but that on the whole the lessor seems to have desired not only that the lessee stop someone if he chanced to see him felling the woodland, but also that he take care and make an active effort to prevent someone’s felling it.

In order to protect the forests, the lessee was explicitly

forbidden to do three things: felling, barking and burning of wood (presumably for the purpose of clearing land). This triad of precisely described prohibitions is meant to protect the forest as an object. But the extent of these prohibitions on the personal level is not clear: who, apart from the lessee himself, is supposed to fall within the realm of this prohibition? It can be presumed that his staff (particularly his slaves) were not allowed to do the things mentioned. But what about strangers, not employed by the lessee: does he have to stop them, if he happens to see them approach or if he catches them *in flagranti*?

To be able to answer this question properly, we have to set out the circumstances precisely. Two things must be said initially. First, following from the word “*redemptor*,” this case concerns a lease granted by the State. The now current privatisation of state property was already a mechanism widely used by the Roman *res publica*. The censor let estates for the period of his office — five years. These leases were offered by way of public auction; the lease was awarded to the highest bidder. He was therefore called “*redemptor*,” this term being applied to purchase by auction. Leases (*locatio conductio*) and contracts for sale (*emptio venditio*) were largely governed by the same rules (D. 19,2,2 pr.). The lessees of state-owned *latifundia* had to be wealthy: they appeared with a crowd of agricultural labourers (mostly slaves); they additionally had to provide the state treasury (*fisc*) with a guarantor who would vouch for their solvency.

Second, Alfenus’ case evidently concerns the lease of a parcel of land which is only partly covered by woods. These woodland areas were thus excluded from use and exploitation, in order to avoid clearances. Conversely, the lease cannot concern a parcel of land completely covered by forests: the prohibition against felling trees would otherwise have virtually robbed the lessee of nearly all possibilities of using the plot. (At most he could have gathered acorns as pig-food, or retained the opportunity of deriving pleasure from hunting). But no lessee would lease land, and pay a considerable sum for this, if it were almost entirely governed by a prohibition, the effect of which would be that he could not use the land. This would be nonsensical, even *contra naturam contractus*. Because the usufruct interest (*uti frui*) is the main reason to lease land, this is a condition of the contract. In passing I may remark that vast, coherent forests and woodland, as they still exist in Scandinavia today, or the tropical rainforests for example in

Brazil, presumably did not exist in Ancient Italy during Alfenus' days either.

General contract terms dictated by the lessor were common; they were called *leges locationis*. According to Alfenus, the (to the lessee) thus proscribed “*sinere*” (“not to allow something,” “not to permit,” “not to let something happen”) has both meanings: one narrower, the other broader. In the light of this ambiguity, it would have been sensible to apply the “ambiguity rule,” which was already employed by the *veteres* (D. 2,14,39). Celsus D. 34,5,26 formulated the rule thus: *Cum quaeritur...quid acti sit, ambiguitas contra stipulatorem est*. The lessor had formulated the clause; he could have expressed himself more precisely; thereafter, all obscurities would have been decided to the burden of the lessor. But Alfenus does not argue so schematically. He asks what the will of the lessor was, and he searches for the purpose of the clause. On the other hand, Alfenus does not consider the possibly adverse will of the lessee — he seems to neglect his interest. Alfenus' decision thereby appears to go against the obscurity rule.¹⁹

Alfenus' lessor-friendly interpretation, however, does not unjustly burden the lessee. Let us assume that at the end of a five year lease, several hundred trees are missing. When approached by the lessor, the lessee is unable to explain their disappearance. Would the judge acquit him?

Things handed to the lessee have to be protected by him against damage. This can be derived from the legal concept of *bona fides* — even without requiring an explicit contract term for this purpose. According to Ulpian, the *conducto* must neither cause nor allow the rented or leased object to decrease in value: *prospicere debet, ne aliquo vel ius rei vel corpus deterior faciat vel fieri patiatur*. The lessee is even obliged to prevent passing troops from plundering, in so far as this can reasonably be expected. According to D. 19,2,13,7 the lessee fled from approaching legionaries. Thus the soldiers settled there; upon their departure, they took valuables with them. They even unhooked the windows and took these as well. Labeo makes the lessee liable for these damages, if it can be assumed that he

¹⁹ Christoph Krampe, “Die ambiguitas-Regel,” SZ 100 (1983) 185 ff., 224 f., cf. 796. Recently, especially in this sense (although in my opinion exaggerated): A. Triscioglio, Sull'interpretatio alfeniana pro locatore in D. 19,2,29, *Archivo giuridico* 220 (2000) 581–610.

would have been able to prevent the plunderings.²⁰ At the very least, he was obligated to notify the lessor, as far as this was possible, and ask him for help. Yet here it appears that he ran away out of cowardice. Before the lease term is ended, however, the lessee may as a rule not abandon the estate.²¹

Theft of wood was already regulated by the Twelve Tables with the special *actio arborum furtim caesarum*.²² The German proverb, “die Axt im Walde ist ein Rufer und kein Dieb” (the axe in the woods is an indicator and not a thief)²³ helps us answer the question whether the lessee is obliged to prevent uninvolved third parties from stealing trees. In older German legal understanding, theft only included secretly committed crimes. But the theft of wood cannot be committed secretly. Large tools are needed, and in open air, their use can often be heard from far away. The felling of trees, especially the crashing down, can be perceived even more easily auditorily than optically. The lessee can easily prevent the felling of trees and the transportation of logs. Large expenditures for fencing in the woodland are not even necessary. All the lessee has to do is to instruct his staff that they must approach suspicious people who come near the woods with axes, and to prevent them from entering the parcel. The lessee would be liable if his workers simply shut their eyes to such matters (connivance) or were even partners in crime.

In classical legal sources, we come eight times upon a *saltuarius* in the sense of guardian of the forest and fields. A slave in this function was part and parcel of a fully equipped estate (*fundus cum instrumento*).²⁴ One of his duties was,

²⁰ Andreas Doll, *Von der vis maior zur höheren Gewalt* (Frankfurt 1989) 34 f.

²¹ This according to the papyri, cf. Joh. Herrmann, *Studien zur Bodenpacht im Recht der graeco-ägyptischen Papyri* (München 1958) 127.

²² D. 19,2,25,5; 47,7,1; Inst. 4,11; Antonio Palma, *Iura vicinitatis* (Torino 1988) 91 ff., reviewed by Rainer, *Labeo* 37 (1991) 115ff., 118.

²³ E. Graf / M. Dietherr, *Deutsche Rechtsprichwörter* (2. Ed. 1869, reprint 1975) p. 78, 363 (nr. 421 ff.), 365 f.

²⁴ D. 33,7 leges 8,1; 12,4; 15,2; 17,2; 20,1. Maria Antonietta Ligios, *Interpretazione giuridica e realtà economica dell' "instrumentum fundi"* (Napoli 1996) 210ff., 240 with nt. 259.

following from D. 33,7,15,2,²⁵ to prevent neighbours from occupying parts of adjacent fields or taking away crops.²⁶ Similarly, the female house-keeper, who was employed year-round, had to keep watch within the villa. Following a ruling of the senate, escaped slaves (*servi fugitivi*) that were found on estates had to be returned to their master or handed over to the magistrate within a certain time limit, under threat of punishment for the owner of the estate or his administrator.²⁷ But wood thieves in open forests are much easier to catch (as we have seen above) than are *servi fugitivi* sneaking around secretly. It is therefore reasonable to expect the lessee to prevent unauthorized persons from felling trees. Alfenus' lessor-friendly interpretation of the clause does not unfairly burden the lessee. The lessee reasonably has to interpret the clause in this sense as well. He cannot demand a monetary reward for this subsidiary duty (*pactum adiectum*). On the contrary, it is necessary to posit such extensive and general protection of the forest, so that the lessee cannot use ignorance as an excuse. As he is the one tending to the land, he is closer to the evidence than the lessor who is normally absent. It is the lessee's duty to secure evidence in cases of natural catastrophes for which he is not liable, such as wind damage and fires, before he can have the damages removed. A strict responsibility of *custodia* is not hereby imposed upon the lessee. The term *custodire*, which only arises in the question posed, is to be

²⁵ D. 33,7,15,2 (Pomponius 6. ad Sabinum):

Mulier villae custos perpetua fundo qui cum instrumento legatus esset aut instructo continebitur, sicuti saltuarius: par enim ratio est: nam desiderant tam villae quam agri custodiam, illic, ne quid vicini aut agri aut fructum occupent, hic, ne quid ceterarum rerum quae in villa continentur: ...

“A woman who was the permanent custodian of a villa will be included in a farm which is legated with its *instrumentum* or as *instructus*, as will the forester. The reason is the same, for both lands and villas require guardians, the one so that neighbors may not seize any of the land or its fruits, the other so that they may not seize any of the other things contained in the villa...”

²⁶ In the same sense D. 7,8,16,1; 32,60,3.

²⁷ D. 11,4,1,1; Heinz Bellen, *Studien zur Sklavenflucht im römischen Kaiserreich* (1971) 12 f.

understood in its non-technical sense.²⁸ In his restrictive answer, Alfenus only affirms a duty, dependent upon blameworthiness (*culpa*), to prevent unauthorized persons from felling wood (*curare et operam dare, ne quis caederet*). The contractual duties are hereby only clarified, whereas the measure of liability remains largely untouched.

Alfenus' deviation from the obscurity rule can be explained by the *effet utile*: the protection of the forest, as the purpose of the clause, is to be achieved as effectively as possible. The interpretation according to the purpose of the contract takes priority, even if, as is here the case, this interpretation would work to the advantage of the party who proposed the clause. The *quod actum est* was to be resolved in this manner. The obscurity rule may not be employed schematically: it only comes into play subsequently, if no clear result can be found by means of interpretation.²⁹

Here the interest of the owner and lessor is identical with the general interest in the protection of the forests. Alfenus' interpretation is not influenced by the *favor fisci*. The clause typically used by the fisc when letting land likely was not restricted to secluded cases. Due to the model function of state leases, private owners of *latifundia* would have inserted such clauses into their leases as well. Following from this, the protection of the environment was ensured to a substantial degree.

The lessor might also be interested in the lessee planting new trees, beyond his (simple) duty to protect the existing forest. As opposed to the sowing of grain, however, this would be a long-term investment, which would benefit not the lessee, but rather would eventually benefit the proprietor after the end

²⁸ Cf. Antonino Metro, *L'obbligazione di custodire nel diritto romano* (Milano 1966) 175 ff. (with parallels); MacCormack, "Custodia and culpa," *SZ* 89 (1972) 191 ff., 194 f.; Bruce Frier, "Tenant's Liability for Damage to Landlord's Property," *SZ* 95 (1978) 232 ff., 244 f.; René Robaye, *L'obligation de garde: Essai sur la responsabilité contractuelle en droit romain* (Bruxelles 1987) 410 ff. On *custodiam praestare* generally, see Riccardo Cardilli, *L'obbligazione di "praestare" e la responsabilità contrattuale* (Milano 1995) 168 ff.

²⁹ Priority requires the principles "*quod actum est*," "*ut magis valeat quam pereat*" and "*quod verisimilius*." In this sense, see the Glossators: cf. Heinrich Honsell, "Ambiguitas contra stipulatorem," in: *Juris professio, Festgabe M. Kaser* (1986) 74 f.

of the lease. Out of fairness, for such increases in value, the lessor would have to agree to a rent reduction. Such an agreement, however, does not seem to have been very common. According to lease certificates on some papyri that were preserved, when the lease ran out the lessee only had to hand back the estate in the same condition as it was in when he took it over.³⁰

The term “plant nursery” or “plant garden” comes up four times in the Digest; every academic is familiar with the word “*seminarium*” (although, today, with a different meaning). The usufructuary of an estate, according to D. 7,1,9,6, is obliged to renew a tree nursery that has been laid out for planting on the estate, just as other accessories must be renewed, so as to be able to return the estate to the proprietor in its original state at the end of the usufruct. In dotal law, Ulpian D. 25,1,3 pr. even counts the laying-out of a plant garden as a necessary utilization (*impensae necessariae*). Because of this, according to Gaius 2,76, a *bona fide* possessor is entitled to a lien (*exceptio doli*) against the vindicating owner.³¹ Even the laying out of new plant gardens thus counts as a considerable investment for the future, which is to be expected from the owner rather than from a simple possessor such as the lessee, who is conscious of his duty to return the property at the end of the lease. This is particularly true of large-scale afforestations. Notably, there is no classical latin word for the term “afforestation.” Nor does the term “forestry” come up in any of the sources from antiquity (the neo-latin word would be *cura* or *administratio silvarum*). Following from this, we can assume that planned afforestation of whole regions was not a subject matter of Roman politics.

IV. THE PROTECTION OF THE BEAUTY OF NATURE

Around 130 AD, according to inscriptions in rocks found in Lebanon, Hadrian put four types of trees under his imperial protection and declared the mountain region a closed forest area. Here we are concerned with one single precaution. It appears to be an exaggeration to call Hadrian the “saviour of the

³⁰ Herrmann [nt. 21] 128 f., 174 f.

³¹ Francesco Musumeci, *Inaedificatio* (1988) 147 f.

white cedar of Lebanon”³² merely on account of this act. Presumably, Hadrian only wanted to secure the precious tree trunks for imperial needs, in particular for building ships.

Those granted the right to fell wood were granted an interdict to ward off force or stealth, *Quod vi aut clam*, against those who chopped down trees without authorisation. Labeo had already granted the same interdict in the case of fountain pollution (D. 43,24,11 pr. above II 4). Under the interdict anyone, apart from the proprietor, who had an interest in preventing the use of force (*quorum interest opus factum non esse*: D. 43,24,11,14) was entitled to be plaintiff.³³ This included anyone to whom the proprietor granted rights to fell trees on the basis of a contract for sale or on any other legal basis (D. 43,24,13,4). Following from this, the protected legal interest was not in the forest as such, but rather the individual’s right to use the forest and to fell wood. Lessees and usufructuaries were also admitted as claimants under the interdict (D. 43,24,12). According to D. 43,24,13,3, a joint proprietor also had available this interdict against his *socius* who cut wood without being authorized to do so. A usufructuary was granted this interdict due to unrightful felling of trees, just as by the *actio legis Aquiliae* against third parties, or as against the proprietor himself (D. 43,24,13 pr.).³⁴

In cases of unauthorized knocking down of trees that bear no fruit — such as cypresses (in contrast to oil trees or vines) — only the proprietor is entitled to the interdict, following from Paul D. 43,24,16,1.³⁵ The right of the usufructuary to harvest

³² This believed Steward Perowne, *Hadrian* (2nd German ed., München 1977) 155; yet contra see Fischer (nt.*) 155f.

³³ Fagnoli [nt. 17] passim, particularly 51 ff.

³⁴ D. 43,24,13 pr. (Ulpianus ad edictum):

Denique si arbores in fundo, cuius usus fructus ad Titium pertinet, ab extraneo vel a proprietario succisae fuerint, Titius et lege Aquilia et interdicto quod vi aut clam cum utroque eorum recte experietur.

“Moreover, if trees in a farm whose usufruct belongs to Titius are cut down by a stranger or by the proprietor, Titius will be able to avail himself of both the *lex Aquilia* and the interdict against force or stealth against either of them.”

³⁵ D. 43,24,16,1 (Paulus ad edictum):

fruit does not appear to be economically impaired, if the producing thing does not bear fruit or if the fruit is as worthless as cypress cones. However, the entitlement of a usufructuary is not simply restricted to his economic interest in reaping fruit. According to Paul, his idealistic interest in the enjoyment of the scenic countryside is also worthy of protection, in order to be able to relax and recuperate in the shady cypress grove and to be able to wander around leisurely. *Non solum fructuum, sed etiam amoenitatis ratione hoc interdictum fructuario competit*, is the commentary of Pothier on this subject.³⁶ An impairment of well-being through destruction of the countryside thus does not remain without legal protection. It would be sheer cynicism if the proprietor wanted to cut down non-fruit-bearing trees because they do not render the usufructuary any economical benefit. Following from this, according to D. 43,24,13 pr. the usufructuary may also defend himself against such trespass by the proprietor. The purely aesthetic value of a pleasant surrounding is hereby recognized as a legal interest, even if its monetary market value cannot be estimated.³⁷ The holder of a right of dwelling (*habitatio*) may also, according to D. 7,8,12,1, go for walks on the estate, go riding, and let himself be carried along in a sedan chair; furthermore, apart from fruit and vegetables for his personal use, he may also pick flowers.

For wealthy Romans an estate was not only an agricultural business, but also a place for relaxation and recuperation

Si quis vi aut clam arbores non frugiferas ceciderit, veluti cupressos, domino dumtaxat competit interdictum. Sed si amoenitas quaedam ex huiusmodi arboribus praestetur, potest dici et fructuarii interesse propter voluptatem et gestationem et esse huic interdicto locum.

“If anyone by force or stealth cuts trees that bear no fruit, such as cypresses, the interdict will be available only to the owner. But if some amenity is also provided by these trees, it can be said that the usufructuary, too, has an interest on account of their value for pleasure and promenades and that the interdict is available also to him.”

³⁶ Quoted by Fargnoli 83.

³⁷ F. Horak, “Ästhetische Probleme bei römischen Juristen,” *Iura* 38 (1987) 155 ff., 160 f.; Fargnoli [nt. 17] 81 ff. — In general, see also Gérard Siebert (ed.), *Nature et paysage dans la pensée et l'environnement des civilisations antiques*. Actes du Colloque Strasbourg 1992 (Paris 1996), reviewed by J.–N. Robert, *Latomus* 58 (1999) 721ff.

(*otium*).³⁸ Following D. 43,20,3 pr., the user of an aqueduct might draw water not only for irrigation purposes and drinking for his livestock, but also *amoenitas causa*,³⁹ meaning to supply an artificial lake, with pleasant fountains and water works.

Following from D. 32,91,5,⁴⁰ a house-owner bought a neighbouring garden property to have thereby a nicer and healthier estate. He also constructed an access between the two, so that the garden appeared to be an annex of the house. If the testator then leaves the house to a legatee, the annexed garden is deemed to be left to him too. The living and garden unit that was produced by the testator is not to be separated again. According to the habitual use by the house owner, the adjacent park had a servient function; the owner had silently formed an “easement” for the benefit of the house (so to speak). An easement over another’s property, in favour of the dominant tenement, would be included in the legacy of a house by way of law. Here the legacy even includes the ownership of the park ground because both plots belong to the testator himself. Notably, this interpretation goes against the “*favor heredis*,” following from which burdens on the heir are not to be assumed. *Amoenitas* and *salubritas* are expressly referred to with respect to one another in the text as indicators for interpretation.

³⁸ Ligios [nt. 24] 228ff. For the revealing facts in D. 17,1,16 see Wacke, SZ 113 (1996) 417f.; Krampe, in: *Quaestiones Iuris*, Festschrift J. G. Wolf (Berlin 2000) 125–149, 129f.

³⁹ D. 43,20,3 pr. (Pomponius ad Sabinum): Hoc iure utimur, ut etiam non ad irrigandum, sed pecoris causa vel amoenitatis aqua duci possit. “We make use of this right so that water may be drawn off not only for irrigation, but for herd animals or amenity.”

⁴⁰ D. 32,91,5 (Papinianus respons.):

Qui domum possidebat, hortum vicinum aedibus comparavit ac postea domum legavit. Si hortum domus causa comparavit, ut amoeniorem domum ac salubriorem possideret, aditumque in eum per domum habuit et aedium hortus additamentum fuit, domus legato continebitur.

“A person who possessed a house bought a garden adjoining the house and later bequeathed the house. If he bought the garden for the house, so as to make the house he possessed more pleasant and healthy, and had access to the garden through the house, and the garden was an addition to the house, the garden will be included in the legacy.”

Salubritas (physical well-being, health and hygiene) and *amoenitas* (beauty and aesthetics) do not thereafter remain without legal protection in Roman law. Apart from natural beauty, *amoenitas* is also the embellishment and maintenance of the townscape;⁴¹ both are important for high living standards. For example, statues erected for the adornment of the town are not allowed to be taken down by anyone.⁴² In the legal sources, *salubritas* has also an abstract meaning, apart from its concrete one: “healthy regulation” (*quae salubriter pro utilitate hominum introducuntur*: Modestin D. 1,3,25), “healthy (wise) advice” (*salubre consilium*: Pap. D. 26,7,5,8).⁴³

The converse action, “*inquinare*,” (to pollute something, for example water or seed) was also used in the abstract sense.⁴⁴ The same applies to *purgare* (to cleanse): concretely, for example, to clear water, sewers, or a legal defect such as default (*purgatio morae*). *Spurcare* is mostly used in its literal sense, meaning to pollute water, but also wine (D. 9,2,27,15). *Contaminare* (to soil) only appears later in imperial constitutes, and almost exclusively in its abstract sense.

V. CONCLUSION

Rather than drafting a detailed summary, we will content ourselves with the following concluding remarks: protection of the environment was certainly not yet a central theme of Roman legal politics. Due to its inherent nature, private law can only protect single environmental elements by way of a reflex function, in so far as private interests are involved (above I 3, II 3). Supplementarily, the Romans availed themselves of isolated, specific laws, particularly laws against the pollution of water (above II 2–5). The protection against emissions, contained in the Digest, forms the basis of the private neighbour law in our

⁴¹ Horak [nt. 37] 158 f. Addiitonally, Rainer, “Probleme der Stadterhaltung in der Spätantike,” *TRG* 59 (1991) 259ff.; Rainer, “Zu den Abbruchbestimmungen in den Stadtrechten,” *SZ* 108 (1991) 325ff.

⁴² D. 43,24,11,1; Fargnoli [nt. 17] 91 ff.

⁴³ Albertario, “L’uso traslato di salubritas etc.,” in: Albertario, *Studi di diritto romano* VI (1953, ex 1921) 181 ff. regarded the word used in the figurative sense as not classical, but the argument is not convincing.

⁴⁴ E. Nardi, “Inquinamento e diritto romano,” in: Nardi, *Scritti minori* I (Bologna 1991) 755 ff.

BGB (§ 906; above II 1). Finally, the effectiveness of religious tabus as a non–legal restraint mechanism is not to be underestimated. Above all, the Romans managed their urban hygiene in excellent fashion due to their exemplary water and waste water management.⁴⁵ These achievements were lost with the coming of the migration of the peoples (4th–6th Century AD); these standards remained unattained throughout the Middle Ages.

⁴⁵ A. Palma, *Le “curae” pubbliche: Studi sulle strutture amministrative romane* (1980; ristampa 1991); Robinson [nt. 8] 95 ff.; H. Hinker, “Grundzüge des öffentlichen römischen Wasserrechts,” in *Vestigia* [nt. 11] 177ff.; Geissler [nt. 18]; van den Bergh [nt.*] 497 ff.; Di Porto, “La gestione di rifiuti a Roma,” in: *Societas–ius: Munuscula di allievi a F. Serrao* (Napoli 1999) 41–69.