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Karl F. Milde

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COMMENTS  
ROMAN CONTRIBUTIONS TO THE LAW OF SOIL  
CONSERVATION

KARL F. MILDE†

“It is not difficult to understand how the refusal of a farmer to protect his own land from erosion can do serious damage to an adjoining farm, as where, for example, uncontrolled gullies pouring out infertile sand, gravel, or subsoil clay, spread these materials over nearby lower lying fields which have been given all the protection the neighboring farmer can provide through his own endeavors.

“It would seem that some means of protection is justified on the part of the farmer whose lands are being damaged in such manner. If, however, the farmer owning the gullies feels that he is unable to control them because of financial circumstances, or because of lack of manpower or knowledge, it might be advantageous to both parties if some satisfactory arrangement could be worked out to get the job done cooperatively. On the other hand, it must be conceded that different circumstances might call for public action of some kind, particularly where there is evidence of pure obstinacy or wilful carelessness on the part of the farmer who refuses to prevent spreading damage from his gullies.”<sup>1</sup>

This excerpt from the Report of the Chief of the Soil Conservation Service for 1948 points up the ever-increasing dilemma facing soil conservation: Shall we continue to rely on persuasion and education or has the time come for the more drastic method of regulation?

Basically, the dilemma stems from the fact that the law of soil conservation, a maze of statutory provisions both federal and state, developed without any attempt to integrate the seemingly new concept into the existing body of law with its foundation of common law principles. From its beginnings in the forestry field with the Act of March 3, 1891,<sup>2</sup> conservation has seemed to be a fight of the public interest against the thoughtless or rapacious individual. Since then, the doctrine that “society as a whole has a vital stake and an enduring responsibility in these [natural] resources”<sup>3</sup> has so dominated conservation policies that it affected even the remedial aspects and our system of conservation, as it grew through the years, was erected on a foundation of public ownership, tax exemptions, subsidies, and regulation. In all justice it should be said that without these means—in particular public ownership of land—conservation could never have succeeded to an even limited extent. The

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† Member of the New York Bar.

1. U. S. DEPT. OF AGRIC., REPORT OF THE CHIEF OF THE SOIL CONSERVATION SERVICE 55 (1948).

2. Authorizing the President to withdraw certain public lands from transfer into private ownership and conferring on him the power to establish out of the Public Domain National Forest Reserves. 26 STAT. 1095, 1103 (1891), 16 U. S. C. §§ 471, 607 (1946).

3. U. S. DEPT. OF AGRIC., *op. cit. supra* note 1, at 54.

emphasis on the public interest angle has had, however, an unfortunate result in contrasting the unselfish public, interested in conservation, with the selfish individual bent on exploitation. The obvious inference was that only subsidies or regulation would prevent the individual from pursuing a course of destruction which was against the public interest but well within his individual legal rights. Forgetting that an action injurious to the public would be first of all injurious to some of its individual members, we failed to implement a conservation system built on measures primarily of a public nature by safeguards for the protection of those individuals who became the first and most direct victims of the soil exploitation by others. When land speculators carry out a grand plow-up in the former dust bowl and the dust starts to blow again, the first result is bound to be ruin and desolation to a great many farmers who conscientiously kept their own land in rotation or in sod.<sup>4</sup> Application of the axiom that "no person is permitted by law to use his property in such a manner that damage to his neighbor is a foreseeable result"<sup>5</sup> might well give protection to those threatened by a new dust bowl, but such has been our reliance on public measures in conservation matters that there is no record of a single common law action to the end of restraining erosion affecting the land of a neighbor in the same watershed or the same potential dust bowl. In fact, so convinced have we been that soil conservation is a new concept subject to its own rules that we have entirely overlooked the aid which, on this very subject, application of ordinary legal principles gave to a nation with one of the knottiest erosion problems of all, the Roman Empire.

## II

Concentrated in the Mediterranean basin, the Roman Empire gradually developed a uniform type of agriculture. Climatic and geological conditions in the Mediterranean basin, which is a region of medium to low, but occasionally violent, rainfall, favored in most locations a system of dry farming. The products of Roman agriculture were, apart from the olive and grape, chiefly grains like wheat, barley and millet. The intensive farming of grains created a vicious circle by containing the area devoted to feed crops, limiting pasture largely to stubble and forest, and thereby reducing animal population<sup>6</sup> and manure production. Green manuring with legumes, *e.g.*, vetch and lupine was recommended by Roman agronomists as far back as Cato, and crop rota-

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4. "Farmers in soil conservation districts in Colorado, for example, tried to prevent the plowing up of unsuitable soils by ordinance, but were out-maneuvered and out-voted by land speculators representing absentee owners. . . . These lands might in very favorable years raise some grain—but in the long run they would raise only dust and misery. To let them go under the plow would be as sensible as turning a tiger loose in the streets." Anderson, *Soil Murder on the Plains*, *THE COUNTRY GENTLEMAN*, Sept. 1947, pp. 85, 87.

5. *Miles v. A. Arena & Co.*, 23 Cal. App. 2d 680, 683, 73 P. 2d 1260, 1262 (1937). *Coole v. Haskins*, 57 Cal. App. 2d 737, 740, 135 P. 2d 176, 177 (1943).

6. In spite of the increase of latifundia devoted to cattle raising, this trend continued unabated as is shown by the decree of Emperor Valens (363-378 A.D.) prohibiting the slaughter of calves "for the benefit of agriculture."

tion was practiced by some of the better managed farms, particularly those in alluvial regions like Campania, but usually farm land lay fallow in alternate years and for purposes of weed control and moisture conservation<sup>7</sup> was cultivated a number of times before sowing. The Romans called this cultivation plowing. Agronomists like Pliny and Columella recommended plowing at least three times and we know that on well-managed farms cultivation was practiced five to ten times a year. Clean cultivation necessitated special protection from water run-off and as we shall see later, such protection was thought so essential that it became the subject of special legal provisions. Moisture conservation was not limited to soil treatment, however, and whenever possible irrigation was used to eliminate the dependence on rainfall. Wells, stream diversion, and storage facilities like ponds and underground reservoirs<sup>8</sup> were employed as an original or supplementary source of water, principally for meadows and the growing of vegetables. While at first sight beneficial to soil conservation, irrigation proved frequently to have the opposite effect. As a result of the capital requirements of constructing irrigation works, it tended to promote large scale holdings and absentee ownership with the attendant evils of inefficiency and instability. The execution under Nero of five men "because they owned half of Africa" was only one of many attempts to solve the social problems raised by the growth of latifundia.<sup>9</sup>

That Roman farming practices were often destructive of soil resources can hardly be questioned. However, more research is necessary for a balanced judgment. Deforestation, caused both by cutting and by pasturing, seems to have been the most serious aspect of soil erosion in Roman times. The claim that by the time the Empire fell it was unable to feed itself due to exhaustion of its soil resources, lacks substantiation, and considering the numbers which Rome had to feed and did feed for century after century, though with growing difficulty and increasing help from Egypt, Rome's record in land utilization and conservation must be regarded as more exemplary than she is generally being given credit for. What share the Roman genius for law and administration had in this achievement remains to be determined and would make a fruitful subject for analysis. An examination of their case law shows the Romans not only conscious of the problem of soil erosion but using ordinary legal principles to combat it.

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7. Modern research seems to indicate that cultivation does not conserve moisture.

8. The remnants of aqueducts created by Roman engineers can be seen in Spain and North Africa as well as in Italy. The French Government has estimated that if all the ancient hydraulic works were resurrected hundreds of thousands of acres could carry crops again.

9. For a discussion of Roman agriculture see the Latin agronomists: Cato the Censor, Varro, Virgil, Pliny and Columella. See: HEITLAND, *AGRICOLA, A STUDY OF AGRICULTURE AND RUSTIC LIFE IN THE GRECO-ROMAN WORLD* (1921); ROSTOVITZEFF, *THE SOCIAL AND ECONOMIC HISTORY OF THE ROMAN EMPIRE* (1926). Stevens, *Agriculture and Rural Life in the Later Roman Empire*, I *THE CAMBRIDGE ECONOMIC HISTORY*, 89-112 (1944). Parain, *The Evolution of Agricultural Technique*, I *THE CAMBRIDGE ECONOMIC HISTORY*, 118-160 (1944).

## III

The Roman law of soil conservation was part of her law of adjoining land owners. Disregarding boundary disputes, this body of law stood largely on the twin pillars of the *actio legis Aquiliae* and the *actio negatoria*; the former corresponding to our action in negligence in cases of property damage, the latter being the equivalent of our actions in trespass and nuisance.

*Actio legis Aquiliae* superseded all previous remedies in negligence cases, including those of the twelve tables and is extensively described in Justinian's Digesta, Liber IX.<sup>10</sup> An action for damages, the *actio legis Aquiliae* lay in the case of adjoining land owners where "A person through his negligence affords an opportunity for the commission of damage to his neighbor's property",<sup>11</sup> e.g., where "one sets fire to his stubble or thorns for the purpose of burning them and the fire spreads so as to injure the wheat and vines of another"<sup>12</sup> or where "Someone through smoke drives other people's bees away or kills them."<sup>13</sup> The principle embodied in the *actio legis Aquiliae* was, in its application to adjoining landowners, buttressed by a number of delictal and quasi-delictal actions in which the praetor could award double damages. One of these supplementary tort actions was the *interdictum quod vi aut clam*, which gave a right to damages in case of violent or clandestine injury to land, and which Roman praetors unhesitatingly used for the protection of the individual's interest in the preservation of his soil resources. Instances in which this action was found to apply—preponderantly between landlord and tenant—were: tearing up the soil<sup>14</sup> and deforestation.<sup>15</sup> "He who fells trees or cuts reeds or willows will be liable [under the *interdictum quod vi aut clam*] for he lays hands upon the earth and injures the soil."<sup>16</sup>

The *actio negatoria* was the Roman action in trespass. Although limited to the owner, it was basically directed against all violations of the right to possession. It included nuisances and, between adjoining property owners, was held to apply to cases like stones thrown on a property from a neighboring quarry,<sup>17</sup> moisture spread from a manure pile to adjoining properties,<sup>18</sup> the emission of smoke and the diversion of fresh air currents. The leading case was the famous *Taberna Casiaria* case in which injunctive relief was held to apply against the discharging of fumes from a cheese factory in Minturnae upon buildings situated above it.<sup>19</sup>

10. The translations are partially the author's own, partially from IV THE CIVIL LAW (S. P. Scott's transl. 1932).

11. DIGEST 9.2.30.3.

12. *Ibid.*

13. DIGEST 9.3.2.49. Compare these facts with those in the *Miles* case in note 5 *supra*.

14. DIGEST 43.24.7.8, and 9.3.

15. DIGEST 43.24.7.5, and 13.3.4.7.

16. *Id.* at 7.5. "*qui arbores succidit, utique tenebitur, et qui harundinem et qui salictum: terrae enim et quodammodo solo ipsi corrumpendo manus inferi.*"

17. DIGEST 8.5.8.5.

18. *Id.* at 17.2.

19. *Id.* at 8.5.6. "He [Aristo] also says that it is not legal to discharge water or any-

As between adjoining property holders, the *actio negatoria* was gradually strengthened by a number of remedies which extended the principle that nobody should suffer acts to be committed on his property which would interfere with the reasonable enjoyment of possession by an adjoining landowner. Examples of this type of remedy were the *operis novi nuntiatio* and the *cautio damni infecti*. One action, the *actio aquae pluviae arcendae* was specifically developed as an erosion control remedy.

The *actio aquae pluviae arcendae* applied first of all only to farm land (*ager*) and not to buildings or urban real estate<sup>20</sup> and was aimed at injunctive relief when operations on a neighboring property on higher ground threatened to cause the entry of run-off rain water in any other than the natural way.<sup>21</sup> Ample dicta make it clear that it was an action against gulying of farm land as a result of operations on adjoining lands. Not that the lower lying land could simply refuse to receive the rain water from the upper land "for as all fertile soil from the land above is carried to the land below, the land below must also accept the inconvenience of receiving the run-off of water from the land above." However, under the law the upper land had to be treated in such a manner that the run-off was natural, *i.e.*, gradual. The farmer below could restrain any operations which—for example, through diversion of water naturally using another water shed or by channeling of water into a smaller area—resulted in an increase of either the amount or the force of the run-off.<sup>22</sup> He could not object to cultivation and furrows, but he could object to ditching or any other method compressing the water in a small area tending to promote gullies.<sup>23</sup>

The room given to this remedy in the Digesta, the many details described, the amount of legal talent quoted indicate that the action, however limited in range it was, was used extensively and must have been a vehicle of definite practical importance in the relations between owners of farm properties. Because of this importance it probably represents the origin of the civil law rule on the run-off of surface water ("undirected by the hands of man") which has found followers in several jurisdictions of this country.<sup>24</sup>

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thing else from an upper to a lower building, as the party has only the right to perform such acts on his own premises as will not discharge anything upon those of another, and there can be a discharge of smoke as well as water. . . . A doubt is raised by Pomponius in the Forty-first Book of Passages, as to whether anyone can allege in an action that he has a right or that another has no right to make a light smoke; as for example one from a hearth on his own premises. He holds that such an action cannot be brought, just as one cannot be brought alleging that a party has no right to make a fire, or to sit down, or to wash on his own premises."

20. DIGEST 39.3.1.17. "*Si aedificio vel oppido noceat, cessat actio.*"

21. *Id.* at 1.1. "*Id est cum quis manu fecerit, quo aliter flueret, quam natura solet.* . . . *Quod si natura aqua noceret, ea actione non continetur.*"

22. DIGEST 39.3.1.1. "*Si forte immitendo eam aut majorem fecerit aut citatiorem aut vehementiorem aut si comprimendo redundare effecit.*"

23. *Id.* at 1.3-9.

24. *Miller v. Letzerick*, 121 Tex. 248, 49 S. W. 2d 404 (1932).