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## Agriculture and the Polluter Pays Principle: An Introduction

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## AGRICULTURE AND THE POLLUTER PAYS PRINCIPLE: AN INTRODUCTION

MARGARET ROSSO GROSSMAN\*

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### *I. Introduction*

The “polluter pays principle” (PPP or principle) requires the polluter to bear the expense of preventing, controlling, and cleaning up pollution. Its main goals are cost allocation and cost internalization. In 1972, the Organisation for Economic Co-operation and Development (OECD) articulated the principle explicitly and in 1989 indicated that it should be applied to agriculture. Though the principle originated as an economic principle, since 1990 it has been recognized internationally as a legal principle.<sup>1</sup> The principle now plays an important role in national and international environmental policy. The European Community (EC) adopted the principle in the 1987 Single European Act,<sup>2</sup> and it has appeared in international agreements, including the Rio Declaration of 1992.<sup>3</sup> The principle is an explicit part of legislation in some nations; in others, it is an implicit subtext for both environmental regulation and liability for pollution.

The nature of agricultural production makes the principle difficult to apply, and it therefore does not always apply to agriculture. In many nations, environmental laws do not require producers to internalize all pollution costs, and environmental subsidies to agriculture sometimes interfere with allocation of those costs. Recently, however, nations have recognized serious air and water emissions from agriculture, and some have enacted stricter environmental regulation. In the United States, for example, the government has implemented new rules for large livestock facilities,<sup>4</sup> and in Europe the EC has enacted the Nitrates Directive.<sup>5</sup> Thus, consideration of the polluter pays principle and agriculture is timely, important, and widely relevant.

Agricultural production practices have an effect on the environment, both positive and negative.<sup>6</sup> Broadly defined, these effects involve the introduction of unwanted chemicals, considered pollutants, into the environment and the

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1. Environment Directorate, Organisation for Economic Co-operation and Development (OECD), *The Polluter-Pays Principle: OECD Analyses and Recommendations*, at 9, OECD Doc. OCDE/GD(92)81 (1992) [hereinafter OECD, *PPP Analyses*].

2. Feb. 17, 1986, 1987 O.J. (L 169) 1.

3. U.N. Conference on Environment and Development, Rio de Janeiro, Brazil, June 3-14, 1992, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/5/Rev. 1 (June 14, 1992), reprinted in 31 I.L.M. 874 (1992) [hereinafter Rio Declaration].

4. 40 C.F.R. pts. 122, 412 (2005).

5. Council Directive 91/676/EEC Concerning the Protection of Waters Against Pollution Caused by Nitrates from Agricultural Sources, 1991 O.J. (L 375) 1.

6. See generally OECD, ENVIRONMENTAL BENEFITS FROM AGRICULTURE: ISSUES AND POLICIES: THE HELSINKI SEMINAR (1997).

consequent alteration of habitat and landscape.<sup>7</sup> The polluter pays principle addresses negative effects of agriculture. In recent years, intensification of agricultural production in many nations has increased these effects, which may include pollution of surface water and groundwater (e.g., with nutrients and chemicals), emissions of substances (e.g., ammonia, particulates, and odors) into the air, and pollution of soils. Other environmental effects, including degradation of habitat and landscape in rural areas, may also occur. Because emissions from agriculture are often diffuse, application of the principle raises particular difficulties. But, in theory, the PPP should apply when agricultural activities impose environmental harm that affects private and public property.<sup>8</sup>

Another principle, the “provider gets principle,” sometimes applies, particularly when producers receive government support for activities that affect the environment, either by avoiding harm or by providing environmental amenities. Agricultural activity may provide attractive rural landscapes and preserve important habitats, for example, which the public values.<sup>9</sup> When producers are asked to modify their practices to provide environmental benefits rather than to avoid harm, subsidies can be justified.<sup>10</sup> Payment for environmental benefits, especially when farmers carry out practices beyond required good farming practices, implements the provider gets principle.

The polluter pays principle is only one of several important environmental principles. Other important principles include the precautionary principle and the principles of preventive action and rectification of environmental damage at its source.<sup>11</sup> The PPP, of course, is closely related to these other principles, and the focus here on the polluter pays principle is not intended to diminish their importance. Indeed, the principles of precaution and preventive action may, at times, help to avoid environmental damage that triggers the PPP.

Because the OECD and the EC have acknowledged and developed the PPP, this article focuses first on those international organizations. After a review of the OECD development of the principle in Part II and the EC adoption of the PPP as a guiding environmental principle in Part III, the article

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7. Ian Hodge, *Agri-environmental Policy: A UK Perspective*, in ENVIRONMENTAL POLICY 216, 219 (Dieter Helm ed., 2000).

8. For an early analysis of PPP and agriculture, see DAVID BALDOCK & GRAHAM BENNETT, *AGRICULTURE AND THE POLLUTER PAYS PRINCIPLE: A STUDY OF SIX EC COUNTRIES* (1991).

9. Hodge, *supra* note 7, at 219-20.

10. As the OECD noted, “Defining who pays and who is paid for the desired level of environmental performance has important implications for the distribution of income and wealth.” OECD, *Improving the Environmental Performance of Agriculture: Policy Options and Market Approaches*, at 6, OECD Doc. COM/AGR/ENV(2001)6 (2001) [hereinafter *Environmental Performance*].

11. On these principles in the EU, see *infra* text accompanying notes 59-60.

looks briefly at its application in international agreements in Part IV. Part V considers the various meanings of the PPP, and an analysis of its application to agriculture in OECD documents follows in Part VI. Finally, in Part VII the article briefly reviews the application of the PPP in U.S. agriculture.

## II. OECD and the Polluter Pays Principle

### A. Development of the Principle

The Organisation for Economic Co-operation and Development (OECD) receives credit for the first formal articulation of the polluter pays principle.<sup>12</sup> The OECD, established in 1960,<sup>13</sup> focuses on sustainable growth of economies and improved economic and social well-being of citizens of the now-thirty member states.<sup>14</sup> Though the original emphasis of OECD was economic, the environment and agriculture are important components of OECD efforts.<sup>15</sup> The OECD explication of the PPP occurred in the early 1970s, and later documents applied the principle to specific instances of environmental harm.

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12. A European lawyer writing about the PPP identifies criteria for a legal principle. In his view, a legal principle

- regulates a legal issue of a rather fundamental nature,
- is a general or common denominator of several specific rules (induction), found in different parts of the law, thus creating a pattern across various sectors,
- is used and accepted as a factor of importance in legal interpretation, in cases where the rules are otherwise unclear,
- could even be applied as a legal rule in areas where rules are lacking (deduction),
- would normally be used as basis for new legislation.

Hans Christian Bugge, *The Principles of "Polluter-Pays" in Economics and Law*, in *LAW AND ECONOMICS OF THE ENVIRONMENT* 53, 73-74 (Erling Eide & Roger van den Bergh eds., 1996). Such a principle would not, however, be a binding rule. *Id.* at 74.

13. Convention on the Organisation for Economic Co-operation and Development, Dec. 14, 1960, 12 U.S.T. 1728, available at 1961 WL 62596.

14. Members are Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The OECD enjoys global influence, because it has relationships with numerous other countries and NGOs. See Ratification of the Convention of the OECD, [http://www.oecd.org/document/58/0,2340,en\\_2649\\_201185\\_1889402\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/58/0,2340,en_2649_201185_1889402_1_1_1_1,00.html) (last visited Jan. 30, 2006).

15. Other subjects that concern the OECD include health, education, taxation, trade, finance, and even corruption and money laundering. See About OECD, [http://www.oecd.org/about/0,2337,en\\_2649\\_201185\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/about/0,2337,en_2649_201185_1_1_1_1,00.html) (last visited Jan. 30, 2006).

### 1. 1972: Guiding Principles

In the early 1970s, OECD countries, including the United States, began to enact more stringent environmental measures. Industry feared the cost of these measures and their effect on competition and therefore pressured governments to subsidize the costs of regulatory compliance or impose environmental tariffs on imports.<sup>16</sup>

In 1972, in response to concerns about the effect of subsidies and tariffs, the OECD adopted its *Guiding Principles Concerning International Economic Aspects of Environmental Policies*.<sup>17</sup> Among these guiding principles is the PPP:

The principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment is the so-called "Polluter-Pays-Principle." The Principle means that the polluter should bear the expenses of carrying out the above mentioned measures decided by public authorities to ensure that the environment is in an acceptable state.<sup>18</sup>

Under the principle, the price of goods in the marketplace should include the costs of pollution prevention and control. In general, polluters should not receive subsidies "that would create significant distortions in international trade and investment,"<sup>19</sup> but in special cases, including "transitional periods," nondistorting subsidies can be permitted.<sup>20</sup> The *Guiding Principles* do not identify the optimal level of pollution, but refer instead to an acceptable state for the environment. They present the PPP as an efficiency principle, aimed at encouraging the "rational use" of resources.<sup>21</sup> Thus, the PPP was initially

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16. OECD, *Environmental Principles and Concepts*, at 12, OECD Doc. GD(95)124 (1995).

17. OECD, *Recommendation of the Council on Guiding Principles Concerning International Economic Aspects of Environmental Policies*, OECD Doc. C(72)128 (May 26, 1972), reprinted in 11 I.L.M. 1172 (1972) [hereinafter OECD, *Guiding Principles*]. Early OECD Definitions and Recommendations are collected in OECD, *THE POLLUTER PAYS PRINCIPLE: DEFINITION, ANALYSIS, IMPLEMENTATION* 11-20 (1975).

18. OECD, *Guiding Principles*, *supra* note 17, ¶ 4, 11 I.L.M. at 1172. The Recommendation includes three other guiding principles: environmental standards (the harmonization principle); national treatment and nondiscrimination; and compensating import levies and export rebates. *Id.* ¶¶ 6-12, 11 I.L.M. at 1172-73. For a discussion of these principles, see Candice Stevens, *The OECD Guiding Principles Revisited*, 23 ENVTL. L. 607 (1993).

19. OECD, *Guiding Principles*, *supra* note 17, ¶ 4, 11 I.L.M. at 1172 (1972).

20. *Id.* ¶ 5, 11 I.L.M. at 1172.

21. *Id.* ¶ 4, 11 I.L.M. at 1172. In fact, the *Guiding Principles* discuss environmental

an economic, rather than a legal, principle.<sup>22</sup>

### 2. 1973: Note on Implementation

In 1973, the Environment Committee of the OECD drafted a *Note on the Implementation of the Polluter-Pays Principle*.<sup>23</sup> The *Note* emphasized that public authorities in each state should identify the “acceptable state” of the environment. The principle itself does not create any environmental standards; it is “no more than an efficiency principle for allocating costs and does not involve bringing pollution down to an optimum level of any type, although it does not exclude the possibility of doing so.”<sup>24</sup> Public authorities must decide the means of implementing the principle; these may include “process and product standards, individual regulations and prohibitions,” or pollution charges.<sup>25</sup> Subsidies for transitional efforts are acceptable exceptions to the principle, provided that the “duration has been laid down in advance” and that international trade is not distorted significantly.<sup>26</sup> An exception could also apply “when steps to protect the environment would jeopardise the social and economic policy objectives of a country or region.”<sup>27</sup> Moreover, financial support of research and development does not violate the PPP.<sup>28</sup>

### 3. 1974: Recommendation on Implementation

The OECD Council adopted a *Recommendation on the Implementation of the Polluter-Pays Principle* in 1974.<sup>29</sup> This document reaffirmed that “[t]he Polluter-Pays Principle constitutes for Member countries a fundamental principle for allocating costs of pollution prevention and control measures

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standards and the “tolerable amount of pollution” in a separate section. *Id.* ¶¶ 6-10, 11 I.L.M. at 1172-73.

There is, however, considerable debate as to whether it actually encourages or hinders efficient allocation and use of resources. *See* Bugge, *supra* note 12, at 55-56. Bugge states that some scholars do not think the principle is important, while others view it as a “no subsidy” principle, and still others view it as a principle of equity. *Id.* at 56. Bugge himself seems to view it as both an equitable and an efficiency principle. *See id.* at 57.

22. Sanford E. Gaines, *The Polluter-Pays Principle: From Economic Equity to Environmental Ethos*, 26 TEX. INT’L L.J. 463, 469 (1991).

23. OECD, *Note on the Implementation of the Polluter-Pays Principle*, OECD Doc. Env. (73)32 (1974), reprinted in 14 I.L.M. 238 (1975).

24. *Id.* ¶ 2, 14 I.L.M. at 239.

25. *Id.* ¶ 4, 14 I.L.M. at 239-40.

26. *Id.* ¶ 7, 14 I.L.M. at 240.

27. *Id.* ¶ 8, 14 I.L.M. at 241.

28. *Id.*

29. OECD, *Recommendation of the Council on the Implementation of the Polluter-Pays Principle*, OECD Doc. C(74)223 (1974), reprinted in 14 I.L.M. 234 (1975).



introduced by the public authorities.”<sup>30</sup> It urged adoption by all member countries to “encourage the rational use and the better allocation of scarce environmental resources and prevent the appearance of distortions in international trade and investment.”<sup>31</sup>

The *Recommendation* created a framework for determining whether aid was consistent with the principle. It indicated that governmental subsidies for pollution control are appropriate in only a few situations: to prevent significant socioeconomic problems caused by rapid implementation of stringent pollution control measures;<sup>32</sup> to stimulate “experimentation with new pollution-control technologies”;<sup>33</sup> and to promote specific socioeconomic objectives when aid has the “incidental effect of constituting aid for pollution-control purposes.”<sup>34</sup> Assistance for pollution control should be “selective and restricted to those parts of the economy, such as industries, areas or plants, where severe difficulties would otherwise occur.”<sup>35</sup> Aid should be granted for a limited period of time, and it must not distort trade and investment.<sup>36</sup>

#### B. Later OECD Documents

##### 1. 1989: Accidental Pollution and Agriculture

The OECD continued to promote the PPP, and later documents expanded its reach and considered issues of interpretation. For example, the 1989 *Council Recommendation on the Application of the Polluter-Pays Principle to Accidental Pollution* explicitly extended the principle to accidental pollution from hazardous substances.<sup>37</sup> OECD treatment of the principle during the

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30. *Id.* ¶ I.1, 14 I.L.M. at 234.

31. *Id.* ¶ I.3, 14 I.L.M. at 235.

32. *Id.* ¶ II.2, 14 I.L.M. at 235.

33. *Id.* ¶ II.3, 14 I.L.M. at 235.

34. *Id.* ¶ II.4, 14 I.L.M. at 235.

35. *Id.* ¶ III.2(2), 14 I.L.M. at 235.

36. *Id.* ¶ III.2(3), 14 I.L.M. at 235.

37. OECD, *Council Recommendation on the Application of the Polluter-Pays Principle to Accidental Pollution*, OECD Doc. C(89)88 Final (1989), reprinted in 28 I.L.M. 1320 (1989). This document defined accidental pollution as “substantial pollution off-site resulting from an accident in a hazardous installation” and “hazardous installations,” in turn, as “fixed installations . . . defined under applicable law as being capable of giving rise to hazards sufficient to warrant the taking of precautions off-site.” *Id.*, 28 I.L.M. at 1322. The *Recommendation* reviewed the 1972 and 1974 OECD documents and indicated that operators of hazardous installations should be held responsible for damage from accidents and measures to prevent such accidents, but that operators should not be charged for accidental pollution from events that they could not reasonably foresee, such as natural disasters. *Id.* Exceptions developed in the 1970s apply to accidental, as well as chronic, pollution. *Id.*, 28 I.L.M. at 1322-24; see also OECD, Notes by the Secretariat, *Application of the Polluter-Pays Principle to*

1970s had focused only on chronic pollution; neither accidental nor nonpoint source pollution had been addressed explicitly.<sup>38</sup>

Also in 1989, the OECD applied the principle to agriculture, in a document discussed in more detail below.<sup>39</sup>

## 2. 1992: Analyses

Soon thereafter, the 1992 *The Polluter-Pays Principle: OECD Analyses and Recommendations*<sup>40</sup> outlined developments since 1972 and highlighted some of the problems encountered in implementing the principle.<sup>41</sup> Since its initial articulation as a principle of economics, interpretation of the principle had moved from application only to pollution prevention and control toward full internalization of pollution costs. Costs covered by the principle now included prevention and control,<sup>42</sup> administrative measures taken by government, damage caused by pollution,<sup>43</sup> and most accidental pollution.<sup>44</sup>

Identification of the polluter is more difficult. Though early OECD documents assumed the polluter was “the person whose activity had given rise to the pollution,” “economic efficiency and administrative convenience” may indicate that the manufacturer of an agent of pollution (for example, the pesticide producer rather than the applicator) should be considered the polluter.<sup>45</sup> Moreover, though the polluter is responsible for certain costs, the

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*Accidental Pollution* (1989), reprinted in 28 I.L.M. 1325 (1989); Compensation for Victims of Accidental Pollution (1991), in OECD, *PPP Analyses*, *supra* note 1, at 39-42.

38. OECD, *PPP Analyses*, *supra* note 1, at 7. In 1982, the OECD had focused for the first time on accidental pollution. A publication on oil spills noted the conflict between different delegations over whether the principle applied “in practice to cases of accidental pollution due to oil spills.” OECD, COMBATTING OIL SPILLS: SOME ECONOMIC ASPECTS 20 (1982). This report included an essay on the PPP and oil spills. *Id.* at 22-32.

39. OECD, AGRICULTURAL AND ENVIRONMENTAL POLICIES: OPPORTUNITIES FOR INTEGRATION (1989) [hereinafter OPPORTUNITIES FOR INTEGRATION].

40. OECD, *PPP Analyses*, *supra* note 1. This document collects earlier Council Acts and explanatory reports.

41. *Id.* at 8.

42. Emphasizing the economic nature of the principle, the OECD stated: “Generally speaking, a polluter has to bear all the costs of preventing and controlling any pollution that he originates. Aside from exceptions listed by OECD, a polluter should not receive assistance of any kind to control pollution . . .” *Id.* at 5 (citations omitted).

43. *Id.* at 6. In 1992, it was clear that the polluter who failed to take required pollution-control measures would be liable to victims for damage. If the polluter has taken all the required measures, liability is not so clear, though if the damage is significant the polluter should generally pay the cost. *Id.* at 6-7.

44. *Id.* at 7-8.

45. *Id.* at 8.

principle does not deal with liability in the legal sense because costs may be passed on to another responsible party.<sup>46</sup>

### 3. 2001: Expansion

A decade later, the OECD continued to focus on the principle, though in a broader context. *The Polluter-Pays Principle as It Relates to International Trade*<sup>47</sup> traced expansion of the principle, both in the OECD and in international provisions, from an initial measure that provided for internalization of the costs of pollution prevention and control — the “strict sense” of the principle, or the “standard PPP” — to a measure that reflects full internalization of environmental costs — the “broad sense” of the principle, or the “extended PPP.”<sup>48</sup> In its strict sense, the principle requires polluters to pay costs of pollution prevention and control;<sup>49</sup> in the broad sense, the polluter’s responsibility extends also to other costs, including charges, taxes, cleanup costs, and compensation.<sup>50</sup>

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46. *Id.* at 9 (“Compensation funds financed by potential polluters” do not violate the principle.)

47. Joint Working Party on Trade and Environment, OECD, *The Polluter-Pays Principle as It Relates to International Trade*, OECD Doc. COM/ENV/TD(2001)44/Final (2002) [hereinafter *PPP and Trade*]. WTO agreements did not mention the principle specifically, but the question of subsidies does arise in WTO measures, for example in the Uruguay Round Agreement on Agriculture. See *id.* at 21-22 for discussion of subsidies that apply to agro-environmental measures under the URAA.

This report defined pollution as “the introduction by man, directly or indirectly, of substances or energy into the environment resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems, and impair or interfere with amenities and other legitimate uses of the environment.” *Id.* at 11 (citing OECD, *Recommendation of the Council on Principles Concerning Transfrontier Pollution*, OECD Doc. C(74)224 (1974), reprinted in 14 I.L.M. 242 (1975)).

48. *PPP and Trade*, *supra* note 47, at 12-15, 34-37. The OECD recommended full internalization of the PPP in a document adopted in May 2001 by the Environment Policy Committee:

To effectively manage natural resources and ensure the continued provision of essential environmental services, OECD countries will need to remove or reform subsidies and other policies that encourage unsustainable use of natural resources — beginning with the *agriculture*, transport and energy sectors . . . and ensure the internalisation of the full external costs of natural resource use through market and other policy instruments, and reflecting the User Pays Principle and the Polluter Pays Principle.

OECD, *Environmental Strategy for the First Decade of the 21st Century*, at 6, ¶ 18, OECD Doc. ENV/EPOC(2000)13/Rev 4 (2001) [hereinafter OECD, *Environmental Strategy*] (emphasis added).

49. The original 1972 *Recommendation* is an example of an application of the principle in its strict sense. See OECD, *Guiding Principles*, *supra* note 17.

50. *PPP and Trade*, *supra* note 47, at 12-15. While the OECD itself has not endorsed the

The report also analyzed application of the principle in several OECD member countries individually.<sup>51</sup> Though OECD members generally require pollution prevention and control, the report noted that some countries continue to subsidize measures to control pollution.<sup>52</sup> Thirty years after the 1972 recommendation, which emphasized the importance of the PPP to avoid distortions in international trade, OECD researchers indicated that environmental subsidies continue to distort trade when they give advantages to producers and conflict with the PPP.<sup>53</sup>

### *III. Polluter Pays in the European Union*

The Treaty of Rome of 25 March 1957, which established the European Economic Community, did not provide for Community competence in environmental matters.<sup>54</sup> Even without special environmental authority, however, a series of Environmental Action Programmes established the PPP in Community policy. Environmental measures, mostly Directives, were adopted under other sources of legislative authority, and these measures applied the principle, explicitly or implicitly.<sup>55</sup> Council Recommendations and Guidelines also applied the principle. Finally, in 1987, the European Community received clear authority to enact measures to protect the environment, and polluter pays was adopted formally as an environmental principle in the European Union.

#### *A. The EC Treaty*

The polluter pays principle became part of primary law in the European Union on 1 July 1987, when the Single European Act (SEA),<sup>56</sup> amending the Treaty of Rome, came into force. The SEA enacted a new title on the

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PPP in its broad sense, covering “the cost of pollution,” the report does note that OECD member countries, in the 1990s, “advocated greater internalisation of pollution externalities,” and also notes that the broad version of the principle applied in the Rio Declaration and the Stockholm Convention. *Id.* at 13-15.

51. *Id.* at 23-26.

52. *Id.* at 23.

53. *Id.* at 27-28. The report recommends further research.

54. For more detail on development of environmental authority in the EC, see Margaret Rosso Grossman, *Agro-environmental Measures in the Common Agricultural Policy*, 25 U. MEM. L. REV. 927, 937-53 (1995).

55. For example, the European Council invoked the principle in a 1975 directive on waste, which provided that “the costs . . . of treating the waste must be defrayed in accordance with the ‘polluter pays’ principle.” Council Directive 75/442 of 15 July 1975 on Waste 75/442/EEC, *publ.*, 1975 O.J. (L 194) 39, 39. Animal and other agricultural wastes were excluded from the directive. *Id.* art. 2, 1975 O.J. (L 194) at 40.

56. Single European Act, Feb. 17, 1986, 1987 O.J. (L 169) 1.

environment, which articulated objectives and guiding principles, authorized environmental legislation, and made environmental protection a component of other European policies. The 1992 Maastricht Treaty amended the environment title slightly,<sup>57</sup> and Treaty provisions were later renumbered.<sup>58</sup>

### 1. *Environmental Principles*

The Treaty title on the environment sets out environmental principles, and those principles, including PPP, apply to agriculture and other EC policies. Under the amended Treaty, “Community policy on the environment . . . shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and *that the polluter should pay*.”<sup>59</sup> Under the so-called integration principle, “[e]nvironmental protection requirements must be integrated into the definition and implementation of [other] Community policies and activities,” including agricultural policy.<sup>60</sup>

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57. Treaty on European Union, Feb. 7, 1992, 1992 O.J. (C 191) 1. The Maastricht Treaty also made the integration principle clearer.

58. Treaty of Amsterdam, Nov. 10, 1997, 1997 O.J. (C 340) 173. In June 2004, EU leaders agreed on the text of a new Treaty Establishing a Constitution for Europe. Dec. 16, 2004, 2004 O.J. (C 310) 1 (2004) [hereinafter Constitution]. The Constitution would create one Union, replacing the European Communities and European Union, and it would govern the Union, replacing the EU and EC Treaties. European Union, Summary of the Agreement on the Constitutional Treaty (June 18, 2004), [http://europa.eu.int/constitution/download/oth25064\\_2\\_en.pdf](http://europa.eu.int/constitution/download/oth25064_2_en.pdf) (a nonpaper to provide information on the Treaty). The proposed Constitution would include environmental provisions. Constitution, *supra*, arts. III-233 to -234, 2004 O.J. (C 310) at 103-05.

After translation into all official languages, the Constitution was signed by Heads of State and Government of the Member States (and by Heads of State of three candidate countries, Bulgaria, Romania, and Turkey) in Rome, in October 2004. All twenty-five Member States must ratify the Constitution, using their own constitutional procedures, before it can enter into force. If the ratification procedure had been successful, the Constitution would have entered into force in November 2006. European Union, Ratification of the Treaty Establishing a Constitution for Europe, [http://europa.eu.int/constitution/referendum\\_en.htm](http://europa.eu.int/constitution/referendum_en.htm) (last visited Jan. 31, 2006). In May and June 2005, however, both France and the Netherlands rejected the Constitution in national referenda, raising doubts about its success. *Id.*

59. Consolidated Version of the Treaty Establishing the European Community, Dec. 24, 2002, art. 174(2), 2002 O.J. (C 325) 33, 107-08 [hereinafter EC Treaty] (emphasis added). The Treaty articulation of the principle differs somewhat in the various languages of the Community. Some versions make clear that the person who pollutes should pay for pollution to the environment. While the “German version discloses nothing as to the substance of the polluter pays principle” (and, indeed, refers to the “causer” principle), “[t]he French and Portuguese versions yield somewhat more, pairing the concepts ‘polluter’ and ‘payer.’” LUDWIG KRÄMER, FOCUS ON EUROPEAN ENVIRONMENTAL LAW 247 (1992).

60. EC Treaty art. 6, 2002 O.J. (C 325) at 42; *see also* Constitution, art. II-97, 2004 O.J. (C 310) at 49. Article II-97 states, “A high level of environmental protection and the

## 2. Meaning of the PPP

The Treaty language itself does not provide hard-law answers to questions — for example, who are polluters and what should they pay? — about application of the polluter pays principle in the EC. A reliable commentator, however, summarized the meaning of the PPP in 1992 as follows:

Community action in environmental matters shall proceed on the basis that the costs for the removal of damage that has occurred to the environment where existing legal provisions have not been adhered to is in principle to be borne by the emitter of the pollution. The burden of such costs shall only be borne by the general public in exceptional circumstances. Exceptions may be formulated differently for the various regions.<sup>61</sup>

### B. Environmental Action Programmes

Even before the amended Treaty enacted the polluter pays principle, that principle had been formulated as “soft law” in EC policy and implemented in secondary legislation. The PPP appears in the 1973 Programme of Action on the Environment and can be traced through the five subsequent Programmes, which should be seen as amendments to, rather than replacements of, the original document.

#### 1. First Environmental Action Programme

##### a) Adopting the PPP

The first Environmental Action Programme (EAP)<sup>62</sup> appeared in November 1973, long before the environment title, including the polluter pays principle, had been added to the Treaty. Among the principles of a community environmental policy, it stated that “[t]he cost of preventing and eliminating nuisances must in principle be borne by the polluter.”<sup>63</sup> The First EAP, echoing the OECD, recognized “certain exceptions and special

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improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development.” *Id.*

61. KRÄMER, *supra* note 59, at 253.

62. Declaration of the Council of the European Communities and of the Representatives of the Governments of the Member States Meeting in the Council of 22 November 1973 on the Programme of Action of the European Communities on the Environment, 1973 O.J. (C 112) 1 [hereinafter First EAP].

63. *Id.* Annex, 1973 O.J. (C 112) 3, 6. See KRÄMER, *supra* note 59, at 253-54, for the clearer formulation in the Commission proposal for the First EAP.

arrangements, in particular for transitional periods, [if they] cause no significant distortion to international trade and investment.”<sup>64</sup> In the context of economic aspects of measures to control pollution, the EAP referred to polluter pays as “the guiding principle for applying economic instruments to carry out the environmental programme without hampering the progressive elimination of regional imbalances in the Community.”<sup>65</sup> This suggests that further work is required to define the “nature, scope and means of implementing this principle,” including possible exceptions.<sup>66</sup>

*b) Defining the PPP*

Soon thereafter, in 1975, the Council issued its Recommendation Regarding Cost Allocation and Action by Public Authorities on Environmental Matters, which called for uniform principles to allocate the costs of environmental protection in all Member States.<sup>67</sup> This document continues to wield influence in the European Community. At the outset, interestingly, it noted that the 1973 EAP had “adopted” the polluter pays principle and indicated that charging polluters with the costs of action to combat pollution would encourage reduction of pollution and development of less polluting products and technologies.<sup>68</sup>

The heart of the Recommendation is its Annex, the Communication from the Commission to the Council Regarding Cost Allocation and Action by Public Authorities on Environmental Matters: Principles and Detailed Rules Governing Their Application (Communication). The Communication identified polluters and what they should pay. More precisely than the OECD,<sup>69</sup> the Communication defined a polluter as “someone who directly or indirectly damages the environment or who creates conditions leading to such

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64. First EAP, *supra* note 62, Annex, at 6. The First EAP also recommends the implementation of the principle at the Community level, and suggests that further “arrangements for its application including the exceptions” be defined. All of the fifteen EU Member States, before the 2005 enlargement to twenty-five, belong to the OECD.

65. *Id.* at 30.

66. *Id.* at 32.

67. Council Recommendation of 3 March 1975, Annex ¶ 3, 1975 O.J. (L 194) 1, 2.

68. *Id.* Annex ¶ 2, at 2.

69. *See PPP and Trade, supra* note 47, at 11. The report states, “In the 1970s, the OECD did not define who the polluter was because, at the time, that seemed fairly obvious: the polluter is the party responsible for the polluting activity, i.e. the party having control over the activity from which the emission of pollutants originates.” *Id.*

damage.”<sup>70</sup> When identifying the polluter is too difficult, such as with cumulative pollution or a pollution chain,

the cost of combating pollution should be borne at the point in the pollution chain or in the cumulative pollution process, and by the legal or administrative means which offer the best solution from the administrative and economic points of view and which make the most effective contribution towards improving the environment.<sup>71</sup>

Standards (e.g., legally binding environmental quality standards) and charges for pollution are appropriate means of preventing pollution.<sup>72</sup> Polluters should bear the cost of pollution control measures and charges: “The costs to be borne by the polluter (under the ‘polluter pays’ principle) should include all the expenditure necessary to achieve an environmental quality objective, including the administrative costs directly linked to the implementation of anti-pollution measures.”<sup>73</sup>

## 2. *Second and Third EAPs*

Though the First EAP adopted the PPP, succeeding EAPs interpret the principle more strictly, and it increases in importance.<sup>74</sup> The Second EAP,<sup>75</sup> published in 1977, restated the PPP in language similar to the First EAP.<sup>76</sup> In its focus on economic aspects, the EAP referred explicitly to the 1975 Council

70. Recommendation, Annex ¶ 3, 1975 O.J. (L 194) at 2. A footnote adds, “The concept of polluter, as defined in this sentence, does not affect provisions concerning third-party liability.” *Id.* ¶ 3 n.2, at 2 n.2.

71. *Id.* Annex ¶ 3, at 2. Krämer identifies this as an economic, rather than a legal, formulation. KRÄMER, *supra* note 59, at 255.

72. Recommendation, Annex ¶ 4, 1975 O.J. (L 194) at 2-3.

73. *Id.* Annex ¶ 5, at 3. “The cost to the public authorities of constructing, buying and operating pollution monitoring and supervision installations may, however, be borne by those authorities.” *Id.*

The *Communication* lists several items that will not be considered contrary to the principle: public funding of installations designed to protect the environment that are too extensive to be funded by charges, financing to compensate polluters for exceptional costs in the face of exceptionally stringent standards, and public contributions to research funding. *Id.* Annex ¶ 7, at 4.

74. CH. W. BACKES ET AL., CODIFICATIE VAN MILIEURECHTELIJKE BEGINSLEN IN DE WET MILIEUBEHEER 102 (2002).

75. Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States Meeting Within the Council of 17 May 1977 on the Continuation and Implementation of a European Community Policy and Action Programme on the Environment, 1977 O.J. (C 139) 1.

76. *Id.* Annex I ¶ 17, at 6.



Recommendation discussed above. The Second EAP recognized the need for more study of the application of the principle, especially as it governs systems of charges and transboundary pollution.<sup>77</sup>

In 1983, the Third EAP,<sup>78</sup> though significantly shorter, provided somewhat greater detail about the PPP. It discussed the principle in the context of optimal resource allocation and indicated that the principle is of “decisive importance.”<sup>79</sup> Using market forces, the principle “constitutes [an] incentive . . . [for polluters] to reduce pollution caused by their activities and to discover less polluting products or technologies.”<sup>80</sup> Relying, like the Second EAP, on the 1975 Council Recommendation, the Third EAP reiterated the importance of subjecting polluters to standards or charges and reviewed the exceptions, limited in both time and scope, to the PPP.<sup>81</sup> Charges, which should also cover residual pollution, merit further study, and they must not give the polluter a license to pollute. For the protection of nature and landscape, state aid may be needed and is normally given to local authorities or voluntary organizations.<sup>82</sup> In implementing environmental protection measures, the Third EAP would coordinate national and Community environmental policies, to ensure a coordinated environmental policy in all its regions.<sup>83</sup>

### 3. Fourth and Fifth EAPs

The Fourth EAP<sup>84</sup> was published in 1987 after the Single European Act<sup>85</sup> had made the PPP part of the Treaty. Thus, this Programme reaffirmed the environmental principles and the integration principle set out in the SEA. The Fourth EAP noted that economic instruments for pollution control must be consistent with the principle, and referred yet again to the 1975 Council

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77. *Id.* at 38.

78. Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States, Meeting Within the Council of 7 February 1983 on the Continuation and Implementation of a European Community Policy and Action Programme on the Environment (1982 to 1986), 1983 O.J. (C 46) 1.

79. *Id.* Annex, at 7.

80. *Id.*

81. This echoes the OECD’s recommendations about exceptions. Commission decisions in 1974 and 1980 had established that a Member State might grant aid to ease introduction of new environmental regulations under certain conditions until 1987. *Id.* at 7.

82. *Id.*

83. *Id.*

84. Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States, Meeting Within the Council of 19 October 1987 on the Continuation and Implementation of a European Community Policy and Action Programme on the Environment (1987-1992), 1987 O.J. (C 328) 1 [hereinafter Fourth EAP].

85. 1987 O.J. (L 169) 1.

Recommendation. The Commission was studying the possibility of extending the deadline, originally the end of 1986, for transitional state aid for pollution control measures.<sup>86</sup>

The Fifth EAP,<sup>87</sup> adopted in 1993, focused on sustainable development and therefore did little to develop the PPP. Instead, it seemed to take the principle as a given, informing other measures. The Programme even assumed that, with correct implementation of the principle, some measures should pay for themselves.<sup>88</sup> This EAP advocated economic instruments that would “internalize all external environmental costs incurred during the whole life-cycle of products.”<sup>89</sup> In a comment that seemed to move away from strict application of the principle, the Fifth EAP, discussing state aid compatible with the PPP, noted the “growing importance of subsidies for particular types of environmental expenditure.”<sup>90</sup>

Interestingly, the Fifth EAP also promised an integrated approach to environmental liability, both to prevent damage to the environment and to ensure restoration of damage. The PPP must be respected fully in a new “mechanism whereby damage to the environment is restored by the person or body who is responsible for the damage incurred.”<sup>91</sup> This EAP anticipated the environmental liability measure discussed below.<sup>92</sup>

#### 4. Sixth EAP

Finally, the Sixth EAP,<sup>93</sup> enacted in 2002 and in force until 2012, continues to advance sustainability and the integration of environmental protection into other Community policies. Like the earlier EAPs, it invokes the PPP, albeit briefly. The Programme notes that it constitutes a “framework” for Community environmental policy, which “shall be based

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86. Fourth EAP, *supra* note 84, at 11, 15. The Fourth EAP indicated that the PPP could be implemented in several specific environmental instances, e.g., waste recycling and charges based on noise from landing aircraft. *Id.* at 28, 32.

87. Resolution of the Council and the Representatives of the Governments of the Member States, Meeting Within the Council of 1 February 1993 on a Community Programme of Policy and Action in Relation to the Environment and Sustainable Development, 1993 OJ (C 138) 1 [hereinafter Fifth EAP].

88. *See generally id.* at 70-72.

89. *Id.* at 71.

90. *Id.* at 72.

91. *Id.* at 82. The Fifth EAP also noted that a “comprehensive review of fines and penalties” should be completed prior to the end of 1993. *Id.* at 81.

92. *See infra* text accompanying notes 135-52.

93. Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 Laying Down the Sixth Community Environment Action Programme, 2002 O.J. (L 242) 1.

particularly on the polluter-pays principle” and the other EC environmental principles.<sup>94</sup> Environmental objectives must be met in light of these principles.<sup>95</sup> Promotion of sustainability, which will internalize both negative and positive impacts on the environment, must also implement the environmental principles, including the PPP.<sup>96</sup>

### C. State Aid for the Environment

EU policies on state aid for the environment consider both the PPP and free competition.<sup>97</sup> The fact that state aid for environmental measures can be available in appropriate circumstances indicates that the Community “sees the polluter-pays principle as a principle which suffers derogations and exemptions.”<sup>98</sup>

#### 1. Community Guidelines

In 1994, the Commission published its Community Guidelines on State Aid for Environmental Protection.<sup>99</sup> In 2001, the Commission followed these with a new set of Community guidelines.<sup>100</sup> More extensive and more detailed, these new guidelines insist that policymakers consider the effects state aid may have on sustainable development and on “full application of the

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94. *Id.* art. 2(1), at 3.

95. *Id.* art. 2(3).

96. *Id.* art. 3(4), at 5. An earlier proposal for the Sixth EAP provides more detail. Article 3 of that draft, “Strategic approaches to meeting environmental objectives,” would have listed “[t]o promote the polluter pays principle . . . to internalise the negative as well as the positive impacts on the environment” as a priority action for Member States. *Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions on the Sixth Environment Action Programme of the European Community*, at 74, COM (2001) 31 final (Jan. 24, 2001) [hereinafter COM (2001) 31].

97. Aid granted by states is governed by EC Treaty articles 87-89. Aid that distorts or threatens to distort competition is prohibited. EC Treaty art. 87. Special rules exist for agriculture. *Id.* art. 36; see *Community Guidelines for State Aid in the Agriculture Sector*, 2000 O.J. (C 28) 2, 3 [hereinafter *Agriculture Guidelines*].

98. LUDWIG KRÄMER, *E.C. TREATY AND ENVIRONMENTAL LAW* 69 (3d ed. 1998).

99. *Community Guidelines on State Aid for Environmental Protection*, 1994 O.J. (C 72) 3 [hereinafter *1994 Community Guidelines*]. The guidelines balanced the requirements of fair competition and environmental policy; aid could be justified when environmental benefits outweigh harmful effects on competition. *Id.* ¶ 1.6. The guidelines, extended several times (lastly at 2000 O.J. (C 184) 25), remained valid until 31 December 2000. They did not apply to agricultural aid governed by Council Regulation No. 2078/92, 1992 O.J. (L 215) 85, one of the so-called “accompanying measures” that provided aid for agro-environmental projects in connection with the 1992 CAP reform. See Grossman, *supra* note 54, at 1026-38 (discussing the accompanying measures).

100. *Community Guidelines on State Aid for Environmental Protection*, 2001 O.J. (C 37) 3 [hereinafter *2001 Community Guidelines*].

‘polluter pays’ principle.”<sup>101</sup> Aid that aims at a high level of environmental protection, with full internalization of costs,<sup>102</sup> may be permitted, while aid that merely helps polluters to comply with mandatory standards may violate the PPP.<sup>103</sup> Accordingly, “aid should no longer be used to make up for the absence of cost internalisation. If environmental requirements are to be taken into account in the long term, prices must accurately reflect costs and environmental protection costs must be fully internalised.”<sup>104</sup>

## 2. Guidelines for the Agriculture Sector

These general Community guidelines, however, do not apply to the agriculture sector.<sup>105</sup> Instead, agriculture follows a separate regime, set out in Community Guidelines for State Aid in the Agriculture Sector.<sup>106</sup> For agriculture, state aid is justified only if it respects the objectives of the Common Agricultural Policy (CAP),<sup>107</sup> which must integrate environmental considerations.<sup>108</sup> The CAP, however, “was not designed as an environmentally friendly policy,”<sup>109</sup> and environmental objectives have been integrated rather slowly. The CAP includes a number of programs that can be said to implement the provider gets principle, but fewer that require the agricultural polluter to pay.<sup>110</sup>

The Agriculture Guidelines govern more than a dozen types of aid (e.g., investments, young farmers, early retirement, damage to production, technical support, and livestock) authorized by CAP legislative measures. Many of

101. *Id.* at 3, ¶ 4.

102. A definition explains: “[I]n these guidelines the ‘internalisation of costs’ means the principle that all costs associated with the protection of the environment should be included in firms’ production costs.” *Id.* ¶ 6. The guidelines are intended, in part, to ensure that environmental aid does not disrupt competition and economic growth. *Id.* ¶ 5.

103. *Id.* ¶ 4.

104. *Id.* at 6, ¶ 20. The guidelines note, *id.* ¶ 19, that the 1994 Community Guidelines, *supra* note 99, allowed aid on a temporary basis, when total cost internalization was not possible.

105. 2001 Community Guidelines, *supra* note 100, 2001 O.J. (C 37) at 4, ¶ 7. They do apply to fisheries and aquaculture.

106. Agriculture Guidelines, *supra* note 97, 2000 O.J. (C 28) 2; *see also* Acceptance of Community Guidelines for State Aid in the Agricultural Sector, 2004 O.J. (C 263) 8.

107. EC Treaty art. 33.

108. *See* EC Treaty arts. 6, 32-38; Agriculture Guidelines, *supra* note 97, 2000 O.J. (C 28) at 4, ¶ 3.9.

109. Pamela M. Barnes & Ian G. Barnes, *Understanding the Costs of an Environmentally ‘Friendly’ Common Agricultural Policy for the European Union*, 11 EUR. ENV’T 27, 35 (2001).

110. For detail on the PPP and the European Union, see a companion article in this issue. Michael Cardwell, *The Polluter-Pays-Principle in European Community Law and Its Impact on United Kingdom Farmers*, 59 OKLA. L. REV. 89 (2006).

these types of aid fall under the Rural Development Regulation,<sup>111</sup> which also authorizes aid for environmental undertakings. Under the Agriculture Guidelines, aid for environmental measures must include special attention to the EC environmental principles: “[A]id schemes which fail to give sufficient priority to the elimination of pollution at source, or to the correct application of the polluter pays principle cannot be considered compatible with the common interest, and therefore cannot be authorised by the Commission.”<sup>112</sup> The Agriculture Guidelines insist that state aid be paid only when the farmer’s undertaking goes beyond “the usual good farming practice in the area to which the measure applies.”<sup>113</sup>

Similarly, in certain areas where farmers work under environmental restrictions to protect wild birds and identified habitats, aid for obligations beyond good farming practice are permitted; moreover, aid “in breach of the polluter pays principle should be exceptional, temporary and degressive.”<sup>114</sup> Indeed, the 1992 Habitats Directive recognized specifically that “the ‘polluter pays’ principle can have only limited application in the special case of nature conservation.”<sup>115</sup>

The Agriculture Guidelines seem to apply the PPP strictly to operating aid: “[t]he Commission does not normally approve operating aid which relieves firms, including agricultural producers, of costs resulting from the pollution or nuisance they cause.”<sup>116</sup> Exceptions must be justified, for example, for new national environmental requirements that go beyond Community requirements or for development of biofuels, and this aid must be temporary (no more than five years) and degressive.<sup>117</sup>

Special rules, which may conflict with the PPP, apply to small and medium sized enterprises.<sup>118</sup> In certain circumstances, such as investments in

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111. Council Regulation No. 1257/1999, 1999 O.J. (L 160) 80, as amended (consolidated version at CONSLEG 1999R1257 – 01/05/2004), to be replaced in 2007 and after by Council Regulation 1698/2005, 2005 O.J. (L277) 1.

112. Agriculture Guidelines, *supra* note 97, 2000 O.J. (C 28) at 8, ¶ 5.1.3.

113. *Id.* at 9, ¶ 5.3.4.

114. *Id.* at 10, ¶ 5.4.2. The guidelines, *id.* ¶ 5.4.1, refer to the Rural Development Regulation, art. 16, which allows payments for farmers who are restricted in connection with the Wild Birds Directive, Council Directive 79/409, 1979 O.J. (L 103) 1, as amended, and the Habitats Directive, Council Directive 92/43, 1992 O.J. (L 206) 7, as amended.

115. Council Directive 92/43, 1992 O.J. (L 206) 7, 8.

116. Agriculture Guidelines, *supra* note 97, 2000 O.J. (C 28) at 10, ¶ 5.5.1.

117. See *id.* ¶ 5.5.4 on rules for tax reductions.

118. Commission Regulation 1/2004 on the Application of Articles 87 and 88 of the EC Treaty to State Aid to Small and Medium-sized Enterprises Active in the Production, Processing and Marketing of Agricultural Products, 2004 O.J. (L 1) 1. Small enterprises are enterprises with fewer than fifty employees and annual turnover not exceeding seven million euros. Commission Regulation 70/2001 on the Application of Articles 87 and 88 of the EC Treaty to

agricultural holdings, and for limited time periods, states may grant aid to enable small and medium sized producers to meet “newly introduced minimum standards regarding the environment,” as well as to protect and improve the environment.<sup>119</sup>

### 3. BSE Guidelines

Separate guidelines followed the crisis caused by bovine spongiform encephalopathy (BSE).<sup>120</sup> These guidelines focus on tests, fallen stock, and slaughterhouse waste. Disposal of both fallen stock and slaughterhouse waste is costly but part of normal production costs. The polluter pays principle would normally require producers of fallen stock and waste to bear primary responsibility for the cost of removal. State aid for fallen stock disposal, however, carries a low risk for distorting competition and may be critical for protecting human health; therefore aid to producers, with limits, can be permitted.<sup>121</sup> State aid to slaughterhouses could distort competition and, after a transition period, is generally prohibited.<sup>122</sup> It is noteworthy that the effect on competition helps to explain the difference in policy between producers and slaughterhouses.

### D. Environmental Liability

In the years between the Fifth and Sixth EAPs, the Community addressed the issue of environmental liability, which had been mentioned briefly in the Fifth EAP.<sup>123</sup> In 2004, the Community enacted a Directive on Environmental Liability.<sup>124</sup>

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State Aid to Small and Medium-sized Enterprises, Annex I, 2001 O.J. (L 10) 33, 39. Medium enterprises are enterprises with fewer than 250 employees and annual turnover not exceeding forty million euros. *Id.* Regulation 70/2001 does not apply to agricultural products. *Id.* art. 1(2)(a), at 35.

119. Commission Regulation 1/2004, arts. 4(2), (5), 2004 O.J. (L 1) at 6. Time limits are set out in art. 2(10), at 5.

120. Community Guidelines for State Aid Concerning TSE Tests, Fallen Stock and Slaughterhouse Waste, 2002 O.J. (C 324) 2 [hereinafter TSE Guidelines]. Guidelines apply from 1 Jan. 2003 until 31 Dec. 2013. *Id.* at 7. BSE or “mad cow disease” is a transmissible debilitating neurological disease in a family of diseases (TSEs) caused by “prions.” A BSE epidemic in England beginning in the late 1980s resulted in the death of over 160,000 cattle, and some humans contracted and died from a related disease, variant Creutzfeldt-Jacob disease. In the United States, only a few cows have been diagnosed with BSE. See Christopher Busch & Jan Paul Mincarelli, *Mad Science and Mad Cows: The Case for EPA Regulation of Prionocidal Substances*, [2004] 34 *Envtl. L. Rep.* (Envtl. Law Inst.) 10,897, 10,897-99.

121. TSE Guidelines, *supra* note 120, at 4-5.

122. *Id.* at 5-6.

123. Fifth EAP, *supra* note 87, at 72, 82.

124. Directive 2004/35 of the European Parliament and of the Council of 21 April 2004 on

### 1. *Green Paper*

Only a few months after publication of the Fifth EAP, the Commission of the European Communities published its *Green Paper on Remedying Environmental Damage*, intended to stimulate Community discussion.<sup>125</sup> The *Green Paper* considered the various uncertainties connected with fault-based and strict liability principles as a method for allocating responsibility for the costs of environmental restoration. The *Green Paper* invoked the PPP, noting that “civil liability is a means for making parties causing pollution to pay for the damage that results.”<sup>126</sup> It wrestled with the question of what constitutes environmental damage, including the “what is pollution” question that is often asked in the context of the polluter pays principle.<sup>127</sup> A brief survey of Member State legislation indicated that most environmental liability regimes contained elements of strict liability and that courts seemed to favor a strict liability approach in the absence of legislation, as did international instruments.<sup>128</sup>

### 2. *White Paper*

The 2000 *White Paper on Environmental Liability*<sup>129</sup> continued the discussion of liability beyond the *Green Paper*, setting out a structure for EC environmental liability that would implement the PPP by ensuring that the party in control of an activity is responsible for damage to the environment.<sup>130</sup> Indeed, the *White Paper* insisted that the first objective of an environmental liability regime should be “making the polluter liable for the damage he has caused.”<sup>131</sup> By enforcing liability, such a regime would force internalization of environmental costs and create incentives for extra precautions and for

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Environmental Liability with Regard to the Prevention and Remedying of Environmental Damage, 2004 O.J. (L 143) 56 [hereinafter Directive 2004/35].

125. *Communication from the Commission to the Council and Parliament and the Economic and Social Committee: Green Paper on Remedying Environmental Damage*, COM (93) 47 final (May 14, 1993) [hereinafter *Green Paper*].

126. *Id.* at 5. Civil liability also enforces the prevention principle, because potential liability is an incentive to avoid damage from pollution. *Id.* The *Green Paper* noted that the Fourth EAP had indicated that polluters should be responsible for damage. *Id.* at 19; see Fourth EAP, *supra* note 84, at 15, ¶ 2.5.5.

127. *Green Paper*, *supra* note 125, at 10.

128. *Id.* at 14-16. No Member State had adequately defined environmental damage.

129. *Commission White Paper on Environmental Liability*, COM (2000) 66 final (Feb. 9, 2000) [hereinafter *White Paper*].

130. *Id.* at 2.

131. *Id.* at 11.

more research to avoid environmental harm.<sup>132</sup> Ultimately, the *White Paper* recommended enactment of a Community directive on environmental liability, which would provide a general framework for liability in a number of sectors. Under the proposal, strict liability would apply to certain environmental damage caused by dangerous activities regulated by the EC,<sup>133</sup> and fault-based liability would apply for damage to biodiversity caused by nondangerous activities.<sup>134</sup>

### 3. Directive on Environmental Liability

In April 2004, the Parliament and Council enacted the Directive recommended by the *White Paper*.<sup>135</sup> The Environmental Liability Directive, though limited in scope, is consistent with the PPP:

The prevention and remedying of environmental damage should be implemented through the furtherance of the ‘polluter pays’ principle . . . . The fundamental principle of this Directive should therefore be that an operator whose activity has caused the environmental damage or the imminent threat of such damage is to be held financially liable, in order to induce operators to adopt measures and develop practices to minimise the risks of environmental damage so that their exposure to financial liabilities is reduced.<sup>136</sup>

Its purpose is “to establish a framework of environmental liability based on the ‘polluter-pays’ principle, to prevent and remedy environmental

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132. *Id.* at 11-12.

133. A strict liability approach seems consistent with the PPP, because the principle itself does not distinguish between polluters who have acted intentionally or negligently and those who were simply engaged in dangerous activity. Instead, it merely mandates that whoever causes pollution should pay.

*See also* COM (2001) 31, *supra* note 96, at 20. This proposal for the Sixth EAP referred to plans to create a community environmental liability regime:

The Treaty provides that Community environmental policy should be based upon certain basic principles — among which the polluter pays principle and the principle of preventative action. Thus, one of the important tasks for the Community is to ensure that those who cause injury to human health or cause damage to the environment are held responsible for their actions and that such injury and damage is prevented wherever possible.

*Id.* (footnote omitted).

134. *White Paper*, *supra* note 129, at 30.

135. Directive 2004/35, *supra* note 124, 2004 O.J. (L 143) 56.

136. *Id.* pmbl. (2), at 56.



damage.”<sup>137</sup> It requires Member State cooperation to implement its requirements.

*a) Environmental Damage*

The Environmental Liability Directive defines environmental damage narrowly to include damage to certain protected species and natural habitats, generally those protected by the Wild Birds<sup>138</sup> and Habitats Directives<sup>139</sup> or by national nature conservation legislation.<sup>140</sup> Environmental damage also includes water damage and land damage.<sup>141</sup> The Directive applies to environmental damage caused by dangerous activities, listed in an Annex, as well as damage to protected species and natural habitats caused by other activities, when the operator has been at fault or negligent.<sup>142</sup> The Directive does not apply to personal injury, damage to private property, or economic loss,<sup>143</sup> so Member State legislation will continue to redress traditional damage to persons and property.

Member States must implement the Directive through a competent authority, and by 30 April 2007 must have national measures to comply with the Directive.<sup>144</sup> The Directive is not retroactive and does not apply to damage caused before that date.<sup>145</sup> Member State measures must require operators, those who carry out the listed activity or hold the authorization for the activity,<sup>146</sup> to take preventive action to avoid environmental damage, to apply measures to remediate the damage, and to bear the costs for preventive and remedial actions.<sup>147</sup>

*b) Application to Agriculture*

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137. *Id.* art. 1, at 59.

138. Council Directive 79/409, 1979 O.J. (L 103) 1.

139. Council Directive 92/43, 1992 O.J. (L 206) 7.

140. Directive 2004/35, *supra* note 124, art. 2(1), 2004 O.J. (L 143) at 59.

141. *Id.* Land damage is contamination that creates “a significant risk of human health being adversely affected as a result of the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms.” *Id.* art. 2(1)(c).

142. *Id.* art. 3, at 60.

143. *Id.* pmbl. (14), at 57. The *White Paper* had recommended that strict liability apply to damage to health and property from dangerous activities, but the Directive did not follow that recommendation. *White Paper, supra* note 129, at 30.

144. Directive 2004/35, *supra* note 124, art. 19(1), 2004 O.J. (L 143) at 65.

145. *Id.* art. 17, at 64.

146. *Id.* art. 2(6), at 60.

147. *Id.* arts. 6-8, at 61-63. Member States can maintain or adopt more stringent measures to prevent and remedy environmental damage and can identify additional activities and responsible parties. *Id.* art. 16, at 64.

The Directive applies to some agricultural activities. Annex III lists the dangerous activities for which strict liability applies. Among these are the contained use of genetically modified micro-organisms and the deliberate release of genetically modified organisms.<sup>148</sup> In addition, by reference to activities that require environmental permits under the Integrated Pollution Prevention and Control Directive,<sup>149</sup> as amended, the Directive also includes certain intensive pig and poultry facilities.<sup>150</sup>

In a provision that would seem contrary to the PPP, the Directive indicates that Member States may allow the operator not to bear the cost of remedial actions under some conditions.<sup>151</sup> This exemption may apply if the operator was not at fault or negligent and the damage was caused by an emission or event expressly authorized and in compliance with national measures that implement EC measures or by an emission or activity that the operator can show was not considered likely to cause environmental damage “according to the state of scientific and technical knowledge” when the emission or activity took place.<sup>152</sup>

#### IV. Polluter Pays in International Agreements

Though some would say that the PPP is “rarely acknowledged” in legal instruments other than OECD and EC texts,<sup>153</sup> it does appear in a number of international instruments.<sup>154</sup> In these, the principle may take either a “binding” or a “nonbinding” form. The binding form includes the PPP in an “operative provision” of the measure, while the nonbinding form may mention the principle only in the preamble.<sup>155</sup> Two international instruments

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148. *Id.* Annex III, at 71. Contained use is defined in Council Directive 90/219, 1990 O.J. (L 117) 1, as amended (consolidated version at CONSLEG 1990L0219 - 20/11/2003); deliberate release is defined in Directive 2001/18 of the European Parliament and Council, 2001 O.J. (L 106) 1, as amended (consolidated version at CONSLEG 2001L0018 - 07/11/2003).

149. Council Directive 96/61 of 24 September 1996 Concerning Integrated Pollution Prevention and Control, 1996 O.J. (L 257) 26, as amended (consolidated version at CONSLEG 1996L0061 - 20/11/2003).

150. *Id.* Annex I, ¶ 6.6. The facilities that require permits are poultry or pig operations with more than 40,000 places for poultry, 2000 places for production pigs over 30 kg., or 750 places for sows. *Id.*

151. Directive 2004/35, *supra* note 124, art. 8(4), 2004 O.J. (L 143) at 62-63.

152. *Id.*

153. NICOLAS DE SADELEER, ENVIRONMENTAL PRINCIPLES: FROM POLITICAL SLOGANS TO LEGAL RULES 21 (2002).

154. See Jonathan Remy Nash, *Too Much Market? Conflict Between Tradable Pollution Allowances and the “Polluter Pays” Principle*, 24 HARV. ENVTL. L. REV. 465, 469 n.8 (2000) (quoting relevant provisions).

155. DE SADELEER, *supra* note 153, at 23-24 (listing measures with binding and nonbinding

that apply or expand the principle are the 1992 Rio Declaration on Environment and Development<sup>156</sup> and the Council of Europe's 1993 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (the Lugano Convention).<sup>157</sup>

#### A. *Rio Declaration*

The influential Rio Declaration on Environment and Development adopts the PPP explicitly in Principle 16:

National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.<sup>158</sup>

Moreover, Principle 13 indicates that states should develop “national law regarding liability and compensation for the victims of pollution and other environmental damage.”<sup>159</sup>

Commentators disagree about the impact of Principle 16. Some argue that the Rio formulation of the PPP is stronger than the original OECD codification, because it “directs governments to assure the internalization of environmental costs through the use of economic instruments, not merely to refrain from subsidizing the purchase and use of pollution control equipment by private industry.”<sup>160</sup> Another commentator noted, however, that the Rio

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provisions).

156. Rio Declaration, *supra* note 3, 31 I.L.M. 874 (1992).

157. Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, June 21, 1993, 32 I.L.M. 1228 (1993) [hereinafter Lugano Convention].

158. Rio Declaration, *supra* note 3, prin. 16, 31 I.L.M. at 879. The Rio Declaration may be the “main reference” for definition of the principle in its “broad sense.” *PPP and Trade*, *supra* note 47, at 37.

159. Rio Declaration, *supra* note 3, prin. 13, 31 I.L.M. at 878. Principle 7 of the Rio Declaration assigns a larger burden for sustainable development to developed than to developing countries. *Id.* prin. 7, at 877. This, too, implicates the PPP, because it calls for developed nations to internalize the costs of their emissions. See Christopher D. Stone, *Common but Differentiated Responsibilities in International Law*, 98 AM. J. INT'L L. 276, 291 (2004).

160. David A. Wirth, *The Rio Declaration on Environment and Development: Two Steps Forward and One Back, or Vice Versa?*, 29 GA. L. REV. 599, 643 (1995). European scholars agree that the Rio Declaration seems to be broader; it refers to the polluter's obligation to bear the “cost of pollution.” BACKES ET AL., *supra* note 74, at 102. It goes beyond the cost of necessary environmental measures and also includes the negative environmental externalities. J. E. Hoitink, *Het beginsel de vervuiler betaalt: ‘revival’ van een milieubeginsel*, 27 MILIEU EN

version is “much less progressive than those previously set out by the OECD and the EC” because of its “aspirational” language and its reliance on economic requirements for application.<sup>161</sup>

The Rio formulation of the principle does not include standardized exceptions articulated by the OECD. Instead, it provides that the PPP should be applied “with due regard to the public interest and without distorting international trade and investment.”<sup>162</sup> Even though it lists no specific exceptions, the phrase “in principle” suggests that the drafter contemplated the possibility of exceptions. The logical assumption, then, is that exceptions to the version of the principle in the Rio Declaration should arise when its application would be against the public interest or when it would distort international trade and investment. Such an assumption might lead to the various OECD and EU formulations and discussions, as the exceptions they have developed seem to have similar goals.<sup>163</sup>

The Rio Declaration version of the PPP favors full internalization of damage costs, as well as expenses for pollution control and prevention.<sup>164</sup> Though the Declaration was not the first embodiment of the principle which called for the internalization of damage costs, this is still a relatively recent phenomenon.<sup>165</sup>

A related document, Agenda 21: Programme of Action for Sustainable Development, implicitly recognizes the PPP in several provisions.<sup>166</sup> Agenda 21 also includes a section on strengthening the role of major groups. Chapter 32, “Strengthening the role of farmers,” has an objective that includes “pricing mechanisms that internalize environmental costs.”<sup>167</sup>

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RECHT 30, 30 (2000). In the Rio formulation, Hoitink states, “The principle of polluter pays is placed in a broader context, that is, as part of a policy that must be directed to stimulate the internalization of environmental costs and the use of economic instruments.” *Id.* at 30-31 (author’s translation). Nonetheless, not all negative externalities must be attributed to the polluter — the PPP is not absolute. *Id.* at 31.

161. DE SADELEER, *supra* note 153, at 25.

162. Rio Declaration, *supra* note 3, prin. 13, 31 I.L.M. at 879.

163. Henri Smets discusses the possibility of exceptions, especially the EU and OECD exceptions to the principle, and suggests that guidance be drawn from these. Henri Smets, *The Polluter Pays Principle in the Early 1990s*, in *THE ENVIRONMENT AFTER RIO: INTERNATIONAL LAW AND ECONOMICS* 131, 137-41 (Luigi Campiglio et al. eds., 1994).

164. *Id.* at 140.

165. *Id.* at 143.

166. U.N. Conference on Environment and Development, Rio de Janeiro, Brazil, June 3-14, 1992, *Agenda 21: Programme of Action for Sustainable Development*, U.N. Doc. A/CONF.151/26/Rev.1, ¶¶ 2.14, 30.3 (Aug. 12, 1992).

167. *Id.* ¶ 32.5.d. The paragraph states “[t]o introduce or strengthen policies that would encourage self-sufficiency in low-input and low-energy technologies, including indigenous practices, and pricing mechanisms that internalize environmental costs.” *Id.*



### B. Lugano Convention

The Lugano Convention<sup>168</sup> is intended to ensure adequate compensation for damage from activities that pose danger to the environment.<sup>169</sup> It introduces the PPP in its preamble: “Having regard to the desirability of providing for strict liability in this field taking into account the ‘Polluter Pays’ Principle . . . .”<sup>170</sup> The Lugano Convention defines both damage and the environment broadly,<sup>171</sup> and would impose strict liability for damage caused by dangerous activities or substances. The Convention would require those engaging in dangerous activities to participate in a financial security scheme, such as insurance, but anticipates no compensation fund.<sup>172</sup> The Lugano Convention may be “the only existing scheme for comprehensive harmonization of environmental liability in Europe, or elsewhere. . . . It is the only conventional scheme in which liability is not limited in amount and to that extent reflects the ‘polluter pays’ principle more closely than other treaties under which the loss is spread.”<sup>173</sup>

Though the Lugano Convention would apply the PPP in a strict liability context, no country has ratified it, even twelve years after its adoption. Therefore the Convention has not entered into force. One commentator suggests that states may hesitate to participate in international liability schemes, in part because they may require changes to national tort law.<sup>174</sup>

### V. Some Observations About the Polluter Pays Principle

As a Dutch commentator noted, “Everyone knows the polluter pays principle, but the exact legal meaning of the principle is still not clear.”<sup>175</sup>

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168. Lugano Convention, *supra* note 157. The Convention refers to Principle 13 of the Rio Declaration, which directs states to develop national law to compensate the victims of pollution. *Id.* pmb., 32 I.L.M. at 1230.

169. *Id.* art. 1, at 1230.

170. *Id.* pmb., at 1230.

171. *Id.* art. 2, at 1231.

172. *Id.* art. 12, at 1235.

173. A. E. Boyle, *Globalising Environmental Liability: The Interplay of National and International Law*, 17 J. ENVTL. L. 3, 15-16 (2005).

174. *Id.* at 16.

175. Hoitink, *supra* note 160, at 30 (author’s translation). Hoitink indicates that there is much uncertainty about the meaning of the principle in legal practice, especially because the principle has sometimes been viewed as an “adage,” rather than a legal principle. *Id.*

Another commentator noted: “The Polluter Pays Principle has come to mean all things to all people, and, in this, it has been rendered somewhat meaningless.” Candice Stevens, *Interpreting the Polluter Pays Principle in the Trade and Environment Context*, 27 CORNELL INT’L L.J. 577, 577 (1994).

Moreover, despite the “simplicity” of the PPP, “[t]he more one attempts to refine its definition, the more elusive the principle becomes.”<sup>176</sup> The PPP invites questions about its meaning and scope.

The OECD and EC documents reviewed above define and explain the PPP in various ways. A recent definition, informed by those documents, is succinct:

The polluter-pays principle is an economic rule of cost allocation whose source lies precisely in the theory of externalities. It requires the polluter to take responsibility for the external costs arising from his pollution. Internalization is complete when the polluter takes responsibility for all the costs arising from pollution; it is incomplete when part of the cost is shifted to the community as a whole.<sup>177</sup>

In reality, as its author recognizes, this clear statement defines an elusive principle.

#### A. *Shifting Meanings*

In the decades since the OECD articulated the PPP as an economic principle, its meaning has changed as it has assumed additional functions and meanings. For example, the PPP is no longer solely an economic principle designed to avoid distortion of competition, but has assumed some status as a legal principle.<sup>178</sup> It applied at first to preventive measures by polluters, then was extended to the cost of government administrative actions occasioned by pollution.<sup>179</sup> Its goals have moved from a partial internalization of the costs of pollution, under the OECD’s 1970s references

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176. DE SADELEER, *supra* note 153, at 60. He continues:

The polluter cannot be pinpointed, because any act of pollution is the result of the act of production — the creator of added value — as well as of final consumption. The principle slips yet further from our grasp as pollution becomes increasingly diffuse and historic in nature, rather than clearly identifiable and contemporaneous with the damage produced.

*Id.*

177. *Id.* at 21.

178. OECD, *PPP Analyses*, *supra* note 1, at 9; *see also* DE SADELEER, *supra* note 153, at 22. De Sadeleer states,

With its origins in economic theory, the polluter-pays principle has progressively moved beyond the sphere of good intentions and scholarly commentary to become a frame of reference for law-makers. It is the essential conceptual basis for a range of legal instruments at the core of environmental legislation and has been used as an element of interpretation by the courts.

*Id.* at 22.

179. Bugge, *supra* note 12, at 76-77.

to keeping the environment “in an acceptable state,” in the direction of full internalization of those costs.<sup>180</sup> Polluters can be expected to pay for measures to control and prevent pollution and, in addition, to restore damage that occurred despite application of those measures.<sup>181</sup> Different interpretations of the principle emphasize these approaches.

In its earliest formulation, the 1972 OECD Recommendation, the PPP was an economic principle,<sup>182</sup> rather than a liability principle.<sup>183</sup> It was considered a “cost allocation or non-subsidization principle intended to guide governments in addressing domestic pollution.”<sup>184</sup> Under this interpretation, sometimes termed the “weak” approach, the principle indicates that polluters should internalize the costs of pollution reduction,<sup>185</sup> at least to the level required by government, and that governments should not subsidize polluters or their pollution reduction. In contrast, the “strong” interpretation goes beyond internalization of the cost of reduction to require polluters also to pay cost to clean up residual pollution in the environment.<sup>186</sup> Corollary goals of

180. DE SADELEER, *supra* note 153, at 26 n.30, 27.

181. BACKES ET AL., *supra* note 74, at 103-04. In this sense, the polluter pays twice. See generally Lucas Bergkamp, *De vervuiler betaalt dubbel: Over de verhouding tussen privaet en publiek milieurecht*, 7 TIJDSCHRIFT VOOR MILIEURECHT 400 (1998).

182. Economists have differing views of the principle. “Some take the principle as a fundamental principle of efficiency . . . other authors underline that the polluter-pays principle does *not* necessarily lead to economic efficiency . . .” Bugge, *supra* note 12, at 55. Other economists view the principle as one of equity or as a political no-subsidy principle. *Id.* at 56.

183. The PPP “is *not* a liability principle, but rather is a principle for the allocation of the costs of pollution control.” Gaines, *supra* note 22, at 468; see also OECD, *PPP Analyses*, *supra* note 1, at 9. The report states,

The Polluter-Pays Principle does not deal with liability since it does not point to the person ‘liable’ for the pollution in the legal sense. When a polluter is identified he does have to bear certain costs and compensate the victims, but he may pass the costs on to the actual party liable for the pollution, whoever it may be.

*Id.* at 9.

184. Stevens, *supra* note 175, at 578.

185. This idea is, of course, consistent with the prevention at source principle. EC Treaty art. 174(2).

186. Nash, *supra* note 154, at 473-77. The situation is more complicated, of course, with multiple polluters or multiple victims. Eric Thomas Larson, Note, *Why Environmental Liability Regimes in the United States, the European Community, and Japan Have Grown Synonymous with the Polluter Pays Principle*, 38 VAND. J. TRANSNAT’L L. 541, 550 (2005). The terms “standard” and “extended” may also be used. Under the standard PPP, polluters pay the cost of “optimal effluent control,” while under the extended PPP, polluters also pay the cost of “the pollution damage done by the remaining optimal effluent.” John Pezzey, *Market Mechanisms of Pollution Control: ‘Polluter Pays’, Economic and Practical Aspects*, in SUSTAINABLE ENVIRONMENTAL MANAGEMENT: PRINCIPLES AND PRACTICE 190, 208-09 (R. Kerry Turner ed., 1988).



the principle are incentives for reduced emission of pollutants and other waste and development of technologies to reduce waste or its harmful effects.<sup>187</sup>

Another interpretation distinguishes the implicit and explicit principles. The former refers to principles developed in economics and law that do not use the term “polluter pays principle,” but do implement rules that require the polluter to pay for the damage caused by pollution. Many environmental laws, of course, fit in this category. The latter applies when the term, or perhaps merely the concept, “polluter pays principle” appears in a legal text.<sup>188</sup>

Even when the PPP is stated explicitly in a legal text, its impact may vary. The principle may appear in the preamble to a measure, such as a multilateral convention, where its role is “to interpret the more precise norms contained in the convention.”<sup>189</sup> In some measures, however, the principle is stated in an operative provision and is therefore legally binding.<sup>190</sup>

#### *B. Several Functions?*

A thoughtful analyst suggested that the polluter pays principle has several different functions that are “at time complementary and at other times mutually exclusive.”<sup>191</sup> The function of *economic integration* avoids distortion of competition. The OECD’s early formulations prohibited state aid to pay the costs of pollution control; limited exceptions, for defined transitional periods, were not considered to distort trade. The *redistribution* function requires the polluter to internalize the costs to government for pollution-control activities. It may allow the polluter to continue to pollute, as long as the polluter pays the appropriate price. The *preventive* function should abate pollution by “encouraging polluters to reduce their emissions instead of being content to pay charges.”<sup>192</sup> This function of the PPP complements the related environmental principle of prevention. Finally, the *curative* function assigns responsibility to polluters for damage to the environment that occurs despite compliance with regulatory requirements, and it may also require compensation to victims of pollution. In so doing, it

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187. Nash, *supra* note 154, at 479. A pedagogical effect may encourage members of the public to take responsibility for their actions. *Id.*

188. Bugge, *supra* note 12, at 58.

189. DE SADELEER, *supra* note 153, at 23.

190. *Id.* De Sadeleer lists different measures, most dating from the 1990s, with the principle stated in an interpretive role in the preamble or in binding form in operative provisions. *Id.* at 23-24.

191. *Id.* at 34.

192. *Id.* at 36.

provides incentives to avoid harmful pollution and environmental degradation.<sup>193</sup>

### C. Several Principles?

Another commentator suggested that the PPP is really several principles with a common core, “the fundamental economic principle of efficiency, and the need to internalize the external effects of pollution.”<sup>194</sup> These different principles, which are both interrelated and overlapping, include

1. The PPP as an economic principle; *a principle of efficiency*.
2. The PPP as a legal principle; *a principal of (“just”) distribution of costs*.
3. The PPP as *a principle of international harmonisation of national environmental policy*.
4. The PPP as *a principle of allocation of costs between states*.<sup>195</sup>

Each of these “principles” raises numerous questions of interpretation and application. Briefly, the most basic statement of polluter pays as a principle of economic efficiency is that “[t]he social costs of pollution should be internalised in the polluter’s cost.”<sup>196</sup> This economic principle suggests that there may be an optimal level of pollution. In contrast, the PPP as a legal principle (here, an implicit legal principle) starts from the premise that “nobody has a general, a priori, right to pollute.”<sup>197</sup> This version allocates the cost of pollution between polluter and victim, normally making the polluter responsible for the costs of “prevention, restitution and damage.”<sup>198</sup> Difficult questions remain, with focus on the nature of pollution, the identity of the polluter,<sup>199</sup> the

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193. *Id.* at 34-37.

194. Bugge, *supra* note 12, at 84.

195. *Id.* at 57.

196. *Id.* at 59.

197. *Id.* at 65 (emphasis omitted).

198. *Id.*

199. See, for example, Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9607(a) (2000), which identifies a broad group of “polluters,” the potentially responsible parties, who face extensive liability. See also Larson, *supra* note 186, at 552-55.

The OECD has not resolved the issue of who the polluter is — that is, when an emission constitutes pollution. Under one approach, pollution occurs when emissions exceed a governmentally-established threshold. DE SADELEER, *supra* note 153, at 38. Emissions that do not exceed the threshold are not considered pollution. Under another approach, pollution is defined by its impact on the environment; only when damage occurs do contaminants constitute pollution. The latter definition, de Sadeleer believes, is appropriate for its “fairness, appropriateness, and legal coherence.” *Id.* at 39-40.

person who should pay, and what should be paid.<sup>200</sup> As an international principle of harmonization, polluter pays seems to refer to the OECD principle, set out above.<sup>201</sup> Though not legally binding, the OECD principle limits government subsidies for measures that prevent pollution; thus it governs “mainly the distribution of costs between the polluter and the government.”<sup>202</sup> OECD member states determine their environmental control policies, so full harmonization of national environmental policy is unlikely; moreover, exceptions often apply.<sup>203</sup> Finally, the principle of allocation of costs between states raises complex issues of transboundary pollution.<sup>204</sup>

#### VI. Agriculture and the Principle in the OECD

The initial OECD formulation of the PPP focused on chronic, industrial sources of pollution, rather than agricultural and other diffuse sources of pollution.<sup>205</sup> Early OECD recommendations on the PPP do not explicitly mention or exclude pollution from agriculture. Seventeen years after its 1972 *Guiding Principles*, the OECD applied the PPP to agriculture. This delay may be explained, in part, by the belief that pollution from agriculture is different from other sources of pollution and that applying the principle to agriculture raises rather unique problems. For example, agriculture generates pollution, but it also has positive environmental effects.<sup>206</sup> The growing tendency to subsidize environmental outcomes in agriculture thus informs application of the PPP to agriculture.<sup>207</sup> Defining the PPP — deciding what constitutes pollution and what a polluter should pay — is difficult, and in the agricultural context, one also has to ask whether the producer should be compensated for improved environmental outcomes. Moreover, most agricultural activity occurs on privately-owned land, and property laws in many nations give farmers broad discretion about use of their land.<sup>208</sup>

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200. Bugge, *supra* note 12, at 65-76. On these questions, *see also* Charles S. Pearson, *Testing the System: GATT + PPP = ?*, 27 CORNELL INT'L L.J. 553 (1994).

201. *See supra* text accompanying note 26. The 1972 OECD *Guiding Principles* also included a harmonization principle (in section A.b.). *See supra* text accompanying notes 17-21.

202. Bugge, *supra* note 12, at 77 (emphasis omitted).

203. *Id.* at 75-77.

204. *Id.* at 81-83.

205. *See* James A. Tobey & Henri Smets, *The Polluter-Pays Principle in the Context of Agriculture and the Environment*, 19 WORLD ECON. 63, 64 (1996).

206. *See generally* Joint Working Party on Agriculture and Environment, OECD, *Agri-Environmental Policy Measures: Overview of Developments*, at 5, OECD Doc. COM/AGR/CA/ENV/EPOC(2002)95/final (2003) [hereinafter OECD, *Agri-Environmental Policy Measures*].

207. *Id.* at 6.

208. Tobey & Smets, *supra* note 205, at 72.

### A. Application to Agriculture

Thus, agriculture became a specific focus of the principle only in 1989, when the OECD indicated that the PPP should apply to agricultural policies and programs designed to prevent, control, or reduce pollution.<sup>209</sup> Recognizing the interdependence of agriculture and environment, the OECD takes into account the unique difficulties states encounter in trying to apply the principle to the agriculture sector. In some instances, states have applied the PPP by ensuring that farmers meet the cost of environmental restrictions on farming practices and that they control on-farm pollution without subsidies. But difficult issues remain. These include “identifying the polluter, finding cost-effective methods of enforcing the Principle and finding equitable methods of allocating the costs of off-farm control measures.”<sup>210</sup> Input charges and levies may be an effective way to internalize pollution costs and avoid placing the burden on taxpayers, especially when diffuse pollution makes the polluter difficult to identify.<sup>211</sup>

Agricultural activities make up a continuum, ranging from those that cause pollution to others that provide environmental benefits.<sup>212</sup> National policy choices will help to distinguish between polluting and nonpolluting activities. Three basic considerations, though, should define implementation of the PPP for agriculture. First, the PPP “should apply to all agricultural policies and programmes which are designed to prevent, control or reduce both point and non-point sources of pollution.”<sup>213</sup> Second, adapting a standard exception to the principle, financial assistance can be paid, but only for a predetermined transitional period, if a new program redefines farmers’ environmental obligations and the payments will speed up environmental

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209. OPPORTUNITIES FOR INTEGRATION, *supra* note 39. The OECD document states, [T]o reduce agricultural pollution, different possible measures need to be considered, either individually or in combination. In some cases, the setting and enforcement of standards will be most efficient. In other cases, the implementation of advisory procedures or the application of economic measures such as incentives or charges may be superior to regulatory enforcement. In all cases the Polluter-Pays Principle should be observed. Efforts should be made to overcome the perceived difficulties associated with applying this principle to the control of agricultural pollution from diffuse sources.

*Id.* at 7.

210. *Id.* at 59.

211. *Id.* at 60.

212. For example, designing and managing storage of animal manure to reduce ammonia emissions is pollution control, while removing a hedgerow or woodland is “probably not pollution,” though it destroys habitat. *Id.* at 60.

213. *Id.* (emphasis omitted).

improvement.<sup>214</sup> Third, to avoid conflict between the PPP and other policies, payments directed toward nonenvironmental objectives should not be considered payments for pollution control, even if they enhance environmental values.<sup>215</sup> Farmers who enter legal agreements to provide positive environmental benefits, beyond the requirements of “normal nonpolluting agriculture,” can be paid for the additional expenses and lost revenues without violating the PPP.<sup>216</sup> Compensation for lost production activities can be paid, but only in specific, limited circumstances.<sup>217</sup>

## *B. Agriculture and Environment*

### *1. Early 1990s*

Having announced that the PPP should apply to agriculture, as well as other industries, the OECD continued to evaluate agriculture and the environment. In 1991, OECD ministers noted that it was necessary to set “prices for agricultural inputs that reflect more fully their environmental costs.”<sup>218</sup> Soon thereafter, in 1993, the OECD summarized the progress of member nations in improving environmental performance of farming in *Agricultural and Environmental Policy Integration: Recent Progress and New Directions*.<sup>219</sup>

The PPP is one of several principles formulated to integrate agricultural and environmental policy, but “[w]hile OECD countries have agreed to apply polluter pays mechanisms [to agriculture], their application is the exception rather than the rule.”<sup>220</sup> Countries may encounter difficulty applying a principle that “runs counter to traditional agriculture-environmental programmes in many developed countries,”<sup>221</sup> especially in cases where producers may expect to receive subsidies for the costs of meeting environmental standards.<sup>222</sup> The principle is technically difficult to apply to agriculture, especially to nonpoint source pollution. The OECD did recognize a number of “potential” polluter pays policies in member countries. Some

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214. *Id.*

215. *Id.* at 61.

216. *Id.* at 62.

217. *Id.*

218. OECD, Communiqué of the Environment Committee Meeting at Ministerial Level, An Environmental Strategy in the 1990s, OECD Doc. SG/Press(91)9 (Jan. 31, 1991), *quoted in PPP and Trade*, *supra* note 47, at 34 n.91.

219. OECD, AGRICULTURAL AND ENVIRONMENTAL POLICY INTEGRATION: RECENT PROGRESS AND NEW DIRECTIONS 7, 33 (1993).

220. *Id.* at 10-11.

221. *Id.* at 33.

222. *Id.* at 17.

nations have enacted regulatory measures and taxes, for example, to encourage pollution control.<sup>223</sup> Even in countries that apply the PPP in principle, though, “it is not strictly applied in practice.”<sup>224</sup>

## 2. 2001: Environmental Benefits

To continue its consideration of environment and agriculture, in 2001 the OECD published *Improving the Environmental Performance of Agriculture: Policy Options and Market Approaches*.<sup>225</sup> Its brief references to the PPP indicate that recent discussion has focused in part on the property rights of farmers, as well as agriculture’s role in providing environmental benefits. Indeed, its definition of the principle suggests that the polluter must pay “where the consumptive or productive activities causing the environmental damage are not covered by property rights.”<sup>226</sup>

This OECD document seems to adopt a “provider gets principle,”<sup>227</sup> but without using that term. If the “demand for environmental benefits goes beyond a reference level marked by defined property rights, the pursuit of environmental targets cannot be enforced without interfering with such rights.”<sup>228</sup> Reference levels are

223. *Id.* at 11.

224. *Id.* at 81; *see also id.* at 25.

225. *Environmental Performance*, *supra* note 10.

226. *Id.* at 10. The definition in full indicates that the PPP states that the polluter should be held responsible for environmental damage caused and bear the expenses of carrying out pollution prevention measures or paying for damaging the state of the environment *where the consumptive or productive activities causing the environmental damage are not covered by property rights*. This is the principle used for allocating costs of pollution prevention and control measures aiming to ensure a rational use of scarce environmental resources and to avoid distortions in international trade and investment.

*Id.* (emphasis added).

227. A Norwegian Minister of Agriculture explained the provider gets principle, which deals with the provision of public goods (e.g. agricultural landscapes or rural viability) . . . [and] relates to society’s demand for public goods *beyond* the reference level, according to an established target. As such goods commonly depend on private production factors, and since private property rights are recognised, the PGP suggests payments, *if necessary*, to the provider of such goods in order to achieve the desired resource allocation.

Jostein Lindland, OECD, *Non-Trade Concerns in a Multifunctional Agriculture: Implications for Agricultural Policy and the Multilateral Trading System*, at 5, OECD Doc. COM/AGR/CA/TD/TC/WS(98)124 (1998).

228. *Environmental Performance*, *supra* note 10, at 46.

measurable levels of environmental quality that should be achieved at the farmer's own expense. Reference levels can be expressed as environmental outcomes, farming practices, or emission levels. The reference level therefore distinguishes between the cases where the polluter pays principle requires that farmers bear the costs of avoiding environmental damage, and those where delivering environmental services by means of privately owned resources or factors of production may require an incentive.<sup>229</sup>

Environmental reference levels are generally achieved through good farming practices, with costs of those practices paid by producers. Beyond that, however, farmers who use "privately owned factors of production" to improve the environment above the reference level provide a service and should receive compensation.<sup>230</sup> Of course, the PPP should apply to make farmers accountable when "agricultural activities encroach on public property rights through imposing environmental harm."<sup>231</sup>

The OECD *Environmental Strategy for the First Decade of the 21st Century*,<sup>232</sup> also published in 2001, set goals for agriculture that reinforce both the polluter pays and the provider gets principles, but did not refer to either principle. OECD countries should

Promote the internalisation of environmental externalities in agriculture, make the transition towards full cost resource pricing, including environmental and social costs, and encourage the implementation of market-based and other policy instruments to enhance the provision of environmental benefits and reduce environmental damage from agriculture.<sup>233</sup>

Member countries should promote sustainable and environmentally sound farming practices and phase out or reform national policies and subsidies that damage the environment.<sup>234</sup>

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229. *Id.* at 9.

230. *Id.* at 46.

231. *Id.*; *see also id.* at 26 (suggesting that environmental reference levels and property rights differ and evolve).

232. OECD, *Environmental Strategy*, *supra* note 48 (setting out a strategy for sustainable development in a number of sectors).

233. *Id.* at 11.

234. *Id.*

### 3. 2003: Developments

The OECD reviewed policy measures in OECD member countries in its 2003 report, *Agri-Environmental Policy Measures: Overview of Developments*.<sup>235</sup> Regulatory requirements address pollution from agriculture, and these have gradually become more stringent. But during the 1990s the use of agri-environmental payments, some of which may violate the PPP, increased.<sup>236</sup> The report focused on the PPP only in the context of environmental taxes and charges. These are used less often in agriculture than in other industries, perhaps because of difficulties of measuring diffuse pollution or because they are sometimes thought to violate the property rights of farmers.<sup>237</sup> Taxes on estimated off-farm emissions or on the sale of inputs such as farm chemicals in a few countries seem consistent with the PPP.<sup>238</sup>

### 4. 2004: A Decade of Lessons

As a summation, the OECD published *Agriculture and the Environment: Lessons Learned from a Decade of OECD Work* in 2004.<sup>239</sup> This report conveys a strong sense that agri-environmental outcomes are part of a complex system, shaped by a number of factors, including the vast scope of agricultural production,<sup>240</sup> the environmental harms and benefits of agriculture, and agricultural and environmental policies. For example, agricultural support is still linked to commodity production in some OECD countries, despite recent policy changes in others. Commodity-linked support is an incentive for higher production, which increases pressure on the environment. At the same time, cross-compliance requirements and agri-environmental measures have led to environmental improvements. Still, the environmental performance of agriculture reflects the tension between environmental measures and agricultural support.<sup>241</sup>

Though the PPP is not its main focus, this report offers some compelling observations about application of the principle to agriculture. Environmental laws and regulations do govern specific sources of agricultural pollution such

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235. OECD, *Agri-Environmental Policy Measures*, *supra* note 206.

236. *Id.* at 11 fig.1.

237. *Id.* at 16.

238. *Id.* These include, for example, the minerals accounting system in the Netherlands; taxes on pesticides and commercial fertilizers; and charges for water use. *Id.*

239. Joint Working Party on Agriculture and the Environment, OECD, *Agriculture and the Environment: Lessons Learned from a Decade of OECD Work* (2004) [hereinafter *Lessons Learned*].

240. "Agriculture in the OECD area accounts for around 40% of total land and nearly 45% of water use and, in many countries, dominates and shapes the landscape." *Id.* at 11.

241. *Id.* at 19-24.



as livestock waste. In some instances, however, producers receive support to cover the cost of compliance, an approach generally rejected in other economic sectors. Therefore, the report notes, “[s]upport payments to offset the cost of regulations need to be assessed in relation to the implementation of the *polluter-pays-principle*.”<sup>242</sup> In addition, the report calls for “full cost internalisation to stimulate incentives to correct environmental damage and encourage innovation in pollution treatment.”<sup>243</sup>

As the OECD had noted earlier, incentive payments dominate agri-environment policy in OECD countries, and few environmental taxes and charges apply.<sup>244</sup> Farmers seem to claim “broad implicit or ‘presumptive’ rights in the use of natural resources.”<sup>245</sup> The report therefore calls for more clearly defined property rights boundaries for agriculture, which would help to determine when farmers should be liable for environmental harm and when they should be paid for environmental services beyond “good farming practices.”<sup>246</sup> That is, property rights regimes and environmental policies should distinguish clearly between the polluter pays principle and the provider gets principle.

In summarizing the policy lessons learned from OECD work on agriculture and the environment, the 2004 report notes, “There is scope for looking for ways to take greater account of agriculture’s environmental costs and benefits in farmers’ production decisions, and for a more comprehensive application of the polluter-pays-principle in agriculture.”<sup>247</sup>

### *VII. The Polluter Pays Principle and U.S. Agriculture*

Though the United States has never formally codified the polluter pays principle,<sup>248</sup> many common law principles and statutes ensure that the polluter pays, at least in some cases. Environmental plaintiffs often rely on tort causes of action such as nuisance and negligence to claim compensation that redresses damage from pollution. Many of the environmental laws enacted in the 1970s and later, after the OECD articulated the principle, are consonant

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242. *Id.* at 25.

243. *Id.* at 24.

244. *Id.*

245. *Id.*

246. *Id.*

247. *Id.* at 7.

248. Gaines, *supra* note 22, at 480. The author states, “The United States, in contrast to the European Nations, does not officially recognize the PPP as a distinct principle or policy mandate, but does, by natural political and economic inclination, closely follow its precepts in practice.” *Id.* (citations omitted). Gaines notes that U.S. law gives few subsidies for pollution control. *Id.*

with the principle. In a sense the United States has, like some other nations, applied the principle in laws that govern environmental liability.<sup>249</sup> U.S. environmental laws include, for example, measures to control emission of pollutants, as well as measures to impose liability for the cleanup of pollutants that have contaminated the environment.<sup>250</sup>

The environmental effects of agriculture, particularly intensive agriculture, are well known and need not be rehearsed in detail here.<sup>251</sup> Nonetheless, it is important to note that emissions from agricultural sources remain a significant source of pollution. Nutrients and chemicals from crop production, as well as waste from livestock operations, reach surface and ground waters. Air emissions from intensive livestock production include criteria and hazardous pollutants and odors.

The following brief discussions of arable farming and livestock production suggest well-known situations in which the principle may not apply, or may not apply fully, to emissions from agriculture. The discussion is focused on application of the PPP through various U.S. laws and is not intended to be a judgment of the approach or efficacy of the laws themselves. It indicates, however, both that U.S. environmental laws often exempt agriculture from measures that apply to other industries and that U.S. agriculture policy relies on incentives and subsidies, rather than regulation, to achieve environmental objectives.<sup>252</sup> Indeed, one scholar announced that “American agriculture policy has carefully avoided application of the polluter-pays principle.”<sup>253</sup>

#### A. Arable Farming

The cultivation processes involved in arable agriculture result in runoff and drainage from farm fields. These often contribute pollutants to surface and ground water in the form of eroded soil along with various nutrients and

249. See Larson, *supra* note 186, at 544; see also *id.* at 547 (noting that the principle has “informed the evolution of environmental law in the United States”).

250. *E.g.*, Clean Water Act, 33 U.S.C. §§ 1251-1387 (2000); Clean Air Act, 42 U.S.C. §§ 7401-7515 (2000); Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9607 (2000) (creating liability under § 107); see also Nash, *supra* note 154, at 471.

251. See, e.g., John H. Davidson, *Factory Fields: Agricultural Practices, Polluted Water and Hypoxic Oceans*, 9 GREAT PLAINS NAT. RESOURCES J. 1 (2004); Jody M. Endres & Margaret Rosso Grossman, *Air Emissions from Animal Feeding Operations: Can State Rules Help?*, 13 PENN ST. ENVTL. L. REV. 1 (2004); J.B. Ruhl, *Farms, Their Environmental Harms and Environmental Law*, 27 ECOLOGY L.Q. 263 (2000).

252. See generally Ved P. Nanda, *Agriculture and the Polluter Pays Principle*, 54 (Supp.) AM. J. COMP. L. (forthcoming 2006).

253. John H. Davidson, *Sustainable Development and Agriculture in the United States*, [2002] 32 Env'tl. L. Rep. (Env'tl. Law Inst.) 10,543, 10,557.

chemicals that adhere to the soil particles. Federal environmental laws, as well as most state laws, do not effectively require producers to minimize erosion, nor do they assess damages for harm that might result. Regulating the effects of erosion and other nonpoint source pollution raises special difficulties, not addressed here. In reality, it may be extremely difficult, and perhaps even ill-advised to apply the PPP fully to diffuse pollution.<sup>254</sup>

Federal environmental law exempts discharge of agricultural wastewater from regulation. Exemptions apply both to point-like sources and to nonpoint sources. For example, return flows from irrigated agriculture could be considered point sources, because they come from a “discernible, confined and discrete conveyance, including . . . any pipe.”<sup>255</sup> The Clean Water Act (CWA), however, explicitly excludes “return flows from irrigated agriculture” from its definition of point sources of water pollution.<sup>256</sup> The CWA also excludes “agricultural stormwater discharges” from the definition of point sources.<sup>257</sup>

Sections 208 and 319 of the CWA govern nonpoint source pollution, including runoff from field agriculture.<sup>258</sup> These sections require state assessment, disclosure, and management programs, but do not impose federal requirements.<sup>259</sup> Federal regulators lack statutory authority to regulate nonpoint source pollution, but instead provide financial incentives to participating states.<sup>260</sup> States often rely on incentives to implement these sections, and few states have enacted mandatory measures to limit erosion. Instead, states rely on Best Management Practices (BMPs), often identified or recommended by the federal Environmental Protection Agency (EPA), to prevent nonpoint source pollution, and the CWA authorizes grants to encourage their adoption.<sup>261</sup> One commentator indicates that the system of BMPs results in “a relatively coordinated approach to nonpoint source

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254. For example, farmers may not be able to pass along their expenses to control pollution; identifying the source of nonpoint pollution is often difficult; and measuring its quantity is costly and technically complex. David Zaring, Note, *Agriculture, Nonpoint Source Pollution, and Regulatory Control: The Clean Water Act's Bleak Present and Future*, 20 HARV. ENVTL. L. REV. 515, 534-35 (1996).

255. 33 U.S.C. § 1362(14).

256. *Id.*

257. *Id.* For a further discussion, including history of this provision, see Ruhl, *supra* note 251, at 294-95.

258. 33 U.S.C. §§ 1288, 1329.

259. *Id.*

260. David Zaring, *Best Practices as Regulatory Regime: The Case of Agricultural Nonpoint Source Pollution*, [2004] 34 *Envtl. L. Rep. (Envtl. Law. Inst.)* 11,025, 11,025-27.

261. See *NRDC v. EPA*, 915 F.2d 1314, 1318 (9th Cir. 1990), *cited in* Zaring, *supra* note 260, at 11,025 n.7.

pollution that is, whatever its flaws (and of course, there are plenty of flaws), complex but coherent.”<sup>262</sup>

The Total Maximum Daily Load (TMDL) provision of the CWA<sup>263</sup> relies on state identification of impaired water bodies and their maximum loads of pollutants, followed by state planning, for reduction of point and nonpoint sources of pollution. Though TMDL requirements apply to nonpoint source pollution,<sup>264</sup> little evidence suggests that states are eager to apply TMDL to govern runoff from agriculture.

Drainage of agricultural land, often by systems of underground tiles and drains, results in pollution because drainage water includes sediment accompanied by fertilizers and chemicals. State water laws may exacerbate the polluting effects of agricultural drainage. State drainage rules often allow changed flows of surface waters needed to make reasonable use of land. State water use laws, in effect, “license the full use of public waterways to carry-off drainage water.”<sup>265</sup> State laws also authorize the formation of public water districts, which may have “the single most profound effect in augmenting runoff pollution” from fields.<sup>266</sup>

### B. Livestock

Livestock production in the United States is increasingly concentrated in large operations, where many animals are raised in confinement. Animal feeding operations often generate large quantities of liquid and solid waste,<sup>267</sup> which sometimes reach water sources and they may also emit significant quantities of regulated air pollutants.<sup>268</sup>

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262. Zaring, *supra* note 260, at 11,026. The author states, “Imposed by statute, but enforced by no one, the CWA’s best practice program represents a rather elaborate, and yet uncoercive example of addressing a regulatory problem through exchanges of information, disclosure requirements, and money.” *Id.* “Thus, instead of rulemaker, EPA plays the role of funder of nonpoint source best practices, as well as, in a limited way, endorser of them, via the promulgation of particular practices that it and other regulators find to be effective.” *Id.*

263. 33 U.S.C. § 1313(d).

264. *Pronsolino v. Nastri*, 291 F.2d 1123 (9th Cir. 2002); *see also* Erin Tobin, Chapter, *Pronsolino v. Nastri: Are TMDLs for Nonpoint Sources the Key to Controlling the “Unregulated” Half of Water Pollution?*, 33 ENVTL. L. 807 (2003).

265. Davidson, *supra* note 251, at 3.

266. *Id.* at 3, 12-18.

267. The U.S. Department of Agriculture estimated that livestock in the nation’s 238,000 animal feeding operations produce more than 500 million tons of manure annually. 68 Fed. Reg. 7176, 7179 (Feb. 12, 2003).

268. For a summary of federal regulation that governs water and air emissions from livestock operations, *see* PERRY HAGENSTEIN ET AL., NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, AIR EMISSIONS FROM ANIMAL FEEDING OPERATIONS: CURRENT KNOWLEDGE, FUTURE NEEDS 129-51 (2003) [hereinafter AIR EMISSIONS].

### *1. Emissions to Water*

The CWA does, in part, apply the PPP to agriculture. Under the CWA, concentrated animal feeding operations (CAFOs) are defined as point sources, subject to the requirements of the National Pollutant Discharge Elimination System (NPDES).<sup>269</sup> Since the 1970s, EPA regulations have applied to CAFOs through national Effluent Limitations Guidelines and Standards (ELGs)<sup>270</sup> and NPDES permit requirements.<sup>271</sup> These regulations, however, required a relatively small number of AFOs to obtain NPDES permits.<sup>272</sup> After nearly a decade of discussion and negotiation, the EPA promulgated new CAFO regulations in December 2002.<sup>273</sup> The new regulations increase the number of facilities that will be defined as CAFOs and must therefore operate under NPDES permits.<sup>274</sup> Regulations require producers to prepare a nutrient management plan that includes best management practices and procedures.<sup>275</sup> Discharges that result from land application, but not those from agricultural stormwater discharges, are subject to NPDES permit requirements.<sup>276</sup> The regulations also impose stricter effluent guidelines for large CAFOs. In most cases, no discharge of wastewater pollutants is allowed.<sup>277</sup> The U.S. Court of Appeals for the Second Circuit decided a challenge to the new regulations, upholding most of the CAFO regulations, but vacating several provisions of the rule and remanding others to the EPA for further clarification.<sup>278</sup>

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269. 33 U.S.C. § 1362(14).

270. 39 Fed. Reg. 5704 (Feb. 14, 1974) (codified at 40 C.F.R. pt. 412).

271. 41 Fed. Reg. 11,458 (Mar. 18, 1976) (codified at 40 C.F.R. pt. 122).

272. In 2001, the EPA estimated that about 12,660 livestock facilities confined more than 1000 animal units, but that only about 4000 facilities had NPDES permits. 66 Fed. Reg. 2960, 2968-69 (2001); *Envtl. Prot. Agency, Proposed Revisions to CAFO Regulations, Frequently Asked Questions 5* (2001), [http://www.epa.gov/npdes/pubs/cafo\\_faq.pdf](http://www.epa.gov/npdes/pubs/cafo_faq.pdf).

273. The regulations appeared in the Federal Register in February 2003, 68 Fed. Reg. 7175, 7176 (Feb. 12, 2003), effective April 14, 2003, though some requirements apply later. The December 2002 deadline resulted from a consent decree entered January 31, 1992, and modified thereafter. *Id.* The modified decree required a proposed rule by Dec. 2000 and final regulatory action by December 15, 2002. 66 Fed. Reg. 2959, 2962 (Jan. 12, 2001).

274. 40 C.F.R. pt. 122.

275. *Id.* § 122.42(e)(1).

276. Regulations prescribe that “where the manure, litter or process wastewater has been applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients . . . , a precipitation-related discharge . . . is an agricultural stormwater discharge.” *Id.* § 122.23(e).

277. 40 C.F.R. pt. 412.

278. *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486 (2d Cir. 2005). The vacated provisions are those that allow permits to be granted without a review of the nutrient

Though the CWA regulates large animal production facilities as point sources of pollution, emissions from smaller livestock facilities are not regulated effectively. Facilities that are not defined by regulation as CAFOs are considered nonpoint sources. These, like other nonpoint sources, including erosion, are governed by less-effective sections of the CWA, sections 208 and 319, which rely on state water quality analysis and management programs.<sup>279</sup> Some will also be regulated through state TMDL programs required by CWA<sup>280</sup> or through provisions of the Coastal Zone Management Act.<sup>281</sup> In general, however, regulation of nonpoint water pollution from agriculture remains weak.

## 2. Air Emissions

Some would argue that application of federal air pollution measures to livestock facilities does not apply the PPP. Air emissions from animal feeding operations include particulate matter, gases, vapors, and odors. Emissions come from animal confinement buildings, manure storage facilities, and land application of waste.<sup>282</sup> Air emissions from livestock facilities include several pollutants regulated by the federal Clean Air Act (CAA).<sup>283</sup> Under the CAA, major sources of air pollution are required to obtain permits and pay an annual permit fee.<sup>284</sup> Most agricultural operations are believed to be minor sources of air pollution, and few have been required to obtain operating permits. Environmentalists, however, assert that many large livestock facilities emit enough regulated pollutants, especially ammonia, per year to exceed the CAA threshold and should therefore be regulated as major sources.<sup>285</sup>

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management plan, allow permits that do not include the terms of the nutrient management plan or provide adequate public participation, and require CAFOs to apply for permits or demonstrate no potential to discharge. *Id.* at 498-506. On remand, the EPA must also clarify several aspect of the rule. *Id.* at 523.

279. 33 U.S.C. §§ 1288, 1329 (2000).

280. *Id.* § 1313(d).

281. 16 U.S.C. §§ 1451-1466 (2000) (especially § 1455b).

282. Endres & Grossman, *supra* note 251, at 3. For example, an August 2005 report indicated that a major source of air pollutants in California's San Joaquin Valley is gases from dairy cattle. DAVID CROW, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DIST., AIR POLLUTION CONTROL OFFICER'S DETERMINATION OF VOC EMISSION FACTORS FOR DAIRIES 2 (2005).

283. 42 U.S.C. §§ 7401-7671(q) (2000).

284. *See generally id.* §§ 7661-7661f (governing permits); 40 C.F.R. pts. 70, 71 (2005).

285. *See, e.g.*, Letter from Env'tl. Integrity Project et al. to John P. Suarez, Assistant Adm'r, Office of Enforcement & Compliance, Env'tl. Prot. Agency (Sept. 2, 2003), <http://www.rffund.org/eip/docs/CAFOCAAtr9-2-03.pdf>.

In addition to the CAA, both the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)<sup>286</sup> and the Emergency Planning and Community Right-to-Know Act (EPCRA)<sup>287</sup> impose reporting requirements that may apply to emissions from large livestock facilities. These federal laws require reports from facilities that release a reportable quantity of certain hazardous pollutants. The EPA has rarely enforced the reporting requirement for livestock facilities that release hazardous air pollutants, but large livestock operations are vulnerable to citizen suits for failure to report.<sup>288</sup>

Monitoring air emissions from confinement buildings, feedlots, waste lagoons, and other components of livestock facilities poses special difficulties. Enforcement of applicable provisions of the CAA, CERCLA, and EPCRA requires accurate measurement of emissions, arguably more accurate than present technology allows.<sup>289</sup> Thus, livestock facilities have seldom been required to comply with these provisions.

A 2003 National Research Council study<sup>290</sup> recommended development of scientifically credible methods for estimating air emissions from livestock facilities. The EPA subsequently proposed and enacted an Animal Feeding Operations Consent Agreement.<sup>291</sup> Under this voluntary program, animal feeding operations agree to pay a civil penalty, contribute to a national emissions monitoring program, and comply with certain environmental requirements.<sup>292</sup> Participants must make their facilities available for monitoring; an independent organization will monitor representative farms. In exchange for participation, the EPA agrees not to sue participating facilities during the two-year monitoring period for certain violations of the CAA, CERCLA, and EPCRA connected with livestock and livestock waste.<sup>293</sup>

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286. 42 U.S.C. §§ 9601-9675 (2000). In general, CERCLA authorizes remediation of certain hazardous waste sites and assigns liability for costs of cleanup when a responsible party can be identified. On the PPP and CERCLA, see Nanda, *supra* note 252 (manuscript at 4-6).

287. 42 U.S.C. §§ 11,001-11,050 (2000). EPCRA requires emergency planning and notification to communities about storage and release of hazardous and toxic chemicals. *Id.* § 11,004.

288. CERCLA's citizen suit provision is broad, *id.* § 9659(a), while EPCRA's is more limited, *id.* § 11,046(a).

289. See generally AIR EMISSIONS, *supra* note 268; PERRY HAGENSTEIN ET AL., NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, THE SCIENTIFIC BASIS FOR ESTIMATING AIR EMISSIONS FROM ANIMAL FEEDING OPERATIONS (2002).

290. AIR EMISSIONS, *supra* note 268.

291. 70 Fed. Reg. 4957 (Jan. 31, 2005).

292. Env'tl. Prot. Agency, Animal Feeding Operations Air Quality Compliance Agreement Fact Sheet (Jan. 30, 2006), <http://epa.gov/compliance/resources/agreements/caa/cafo-fcsht-0501.html>.

293. *Id.*

Livestock producers could sign up to participate in the air compliance program between 31 January and 12 August 2005.<sup>294</sup> In total, 2681 applicants, with over 6700 farms, from forty-two states signed up for the program, and the EPA approved the first twenty agreements in January 2006.<sup>295</sup> After the EPA determines that all types of animals are represented and agreements are approved, the two-year monitoring process on twenty-eight to thirty selected farms can begin. Monitoring is designed to result in data so that the EPA can develop accurate methodologies for estimating emissions of air pollutants.<sup>296</sup> Some would argue that this lengthy process, which allows livestock facilities to continue their emissions, does not comply with the PPP.<sup>297</sup>

### *C. Environmental Aid and the Polluter Pays Principle*

Current U.S. agricultural legislation imposes environmental requirements on producers who receive farm program payments and provides financial incentives for conservation and environmental programs. The following brief discussion focuses on cross-compliance measures, which help to implement the PPP, and environmental subsidies, which do not. The discussion provides examples, but does not attempt a comprehensive inventory of legislation.

#### *1. Cross-Compliance*

The 1985 Farm Bill<sup>298</sup> was the first time that environmental interest groups played a significant role in drafting federal agricultural legislation.<sup>299</sup> Since then, environmental measures have played a more important role in U.S. agricultural policy. Producers who receive federal farm support must

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294. Animal Feeding Operations Consent Agreement, 70 Fed. Reg. at 4958; 70 Fed. Reg. 16,266 (Mar. 30, 2005); 70 Fed. Reg. 40,016 (July 12, 2005); 70 Fed. Reg. 44,631 (Aug. 3, 2005) (setting and extending sign-up deadline).

295. News Release, Env'tl. Prot. Agency, EPA Environmental Appeals Board Approves First Air Compliance Agreements with Animal Feeding Operations (Jan. 30, 2006).

296. Animal Feeding Operations Consent Agreement, 70 Fed. Reg. at 4958; News Release, Env'tl. Prot. Agency, Thousands Sign Up for Animal Feeding Operations Air Compliance Agreement (Aug. 15, 2005).

297. *E.g.*, Editorial, *Phew! EPA's Giveaway to Feedlots*, STAR TRIB. (Minneapolis), Jan. 31, 2005, at A12. This *Star Tribune* editorial suggested that the amnesty is likely to last three to six years. "In the meantime, the polluting operations will continue to pump out ammonia, methane, hydrogen sulfide, fine particles and other noxious substances in concentrations that are not only broadly annoying but sometimes harmful to the environment and human health." *Id.*

298. Food Security Act of 1985, Pub. L. No. 99-198, 99 Stat. 1354 (1985).

299. Interview with Robert L. Thompson, Gardner Chair in Agric. Policy, Univ. of Ill. Dep't of Agric. & Consumer Econ. (Apr. 12, 2005).



implement cross-compliance measures to conserve highly erodible land (conservation compliance),<sup>300</sup> and to protect wetlands (swampbuster).<sup>301</sup> Both programs are considered voluntary, because farmers are not required to accept farm program payments.

Federal conservation provisions for highly erodible land (HEL)<sup>302</sup> are designed only in part to reduce pollution, that is, off-site damage from erosion. Other goals are to keep HEL in production and to protect soil productivity. The requirements apply to any producer “who in any crop year produces an agricultural commodity on a field on which highly erodible land is predominate.”<sup>303</sup> Unless the producer applies a conservation plan using approved conservation systems, he or she is not eligible for specific government support, loans, and conservation programs. Violations of the HEL provisions normally result in loss of federal farm program payments for all commodities on all land farmed by the producer.<sup>304</sup>

Similar provisions protect wetlands, though the emphasis on preventing conversion for farming suggests that the preservation of wetlands<sup>305</sup> is a more important goal than avoiding pollution. Under the “swampbuster” provisions, producers will not be eligible for certain U.S. Department of Agriculture farm program benefits if they have produced commodities on converted wetlands after 1985 or have converted wetlands for crop production after 1990.<sup>306</sup> Producers may be exempt from ineligibility if their actions have only a minimal effect on wetland functions and values or if they mitigate the effects of their actions.<sup>307</sup> Furthermore, the Secretary of Agriculture may waive

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300. 16 U.S.C. §§ 3811-3814 (2000); 7 C.F.R. pt. 12 (2006). Of course, soil conservation was a federal and state priority long before 1985.

301. 16 U.S.C. §§ 3821-3824; 7 C.F.R. pt. 12.

302. Highly erodible land has an erodibility index of eight or more. 7 C.F.R. § 12.21(b). The erodibility index is defined by the ratio of inherent erodibility (tons/acre/year on clean-tilled land) to the soil loss tolerance (tons/acre/year without long-term loss of productivity). ROGER CLAASSEN ET AL., U.S. DEP'T OF AGRIC., ENVIRONMENTAL COMPLIANCE IN U.S. AGRICULTURAL POLICY: PAST PERFORMANCE AND FUTURE POTENTIAL 2 (2004).

303. 16 U.S.C. § 3811(a). Compliance requirements are imposed field by field. If a field has predominately highly erodible soils, conservation measures must be applied to the whole field. CLAASSEN ET AL., *supra* note 303, at 14. A field is predominately HEL if 33.33% or more of total acreage or fifty more acres are highly erodible. 7 C.F.R. § 12.22(a).

304. 16 U.S.C. § 3811.

305. To discourage conversion of wetlands, the Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085 (1986), eliminated some income tax benefits, including deductions for expenses incurred in converting wetlands for agricultural use.

306. 16 U.S.C. § 3821. Swampbuster requirements are independent of § 404 of the CWA, which requires permits for “discharge of dredged or fill material” into navigable waters, including certain wetlands. 33 U.S.C. § 1344(a).

307. 16 U.S.C. § 3822(f); 7 C.F.R. § 12.5. Mitigation may take the form of restoring a

ineligibility for program benefits if the producer acted in good faith and with no intent to violate wetland protection requirements.<sup>308</sup> In February 2005, a federal appellate court rejected a producer's claim that Congress lacks constitutional authority to make farm program payments contingent on preserving wetlands.<sup>309</sup>

## 2. Subsidies — *The Provider Gets?*

U.S. agricultural legislation has long provided financial and technical assistance to agricultural producers. Often this assistance has focused on conservation measures, including those that would help to avoid the polluting effects of soil erosion. A recent measure, discussed below, helps producers implement measures to comply with environmental laws. To some extent, these payments violate the nonsubsidy aspect of the PPP.

Some measures offer payments that help producers provide environmental amenities (public goods) beyond mere avoidance of pollution and beyond the minimum level required by law. These incentives may provide an example of the provider gets principle, which indicates that “the provider of a public good should receive payment for the provision of that good.”<sup>310</sup>

### a) *Environmental Quality Incentives Program*

Federal subsidies, which would seem to violate the PPP, are available to producers, especially livestock producers. The Environmental Quality Incentives Program (EQIP) helps producers to comply with regulatory requirements for soil, water, and air quality; wildlife habitat conservation; and surface and ground water conservation.<sup>311</sup> First enacted in 1996, EQIP has been reauthorized through 2007,<sup>312</sup> with a significant funding increase to \$1.3 billion in fiscal year 2007.<sup>313</sup> Environmental practices relating to livestock

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converted wetland, enhancing an existing wetland, or creating a new wetland in the same watershed. 16 U.S.C. § 3822(i); 7 C.F.R. § 12.5(b)(4)(i).

308. 16 U.S.C. § 3822(h)(1).

309. *Horn Farms, Inc. v. Johanns*, 397 F.3d 472, 476-77 (7th Cir. 2005) (rejecting Horn's argument that the swampbuster provisions are a misuse of Congress's spending power).

310. Hodge, *supra* note 7, at 220.

311. 16 U.S.C. §§ 3839aa to 3839aa-9; 7 C.F.R. pt. 1466. EQIP is now part of a program now called the Comprehensive Conservation Enhancement Program; under prior law, it was part of the Environmental Conservation Acreage Reserve Program.

312. Farm Security and Rural Investment Act of 2002, Pub. L. No. 107-171, § 2301, 116 Stat. 134, 253 (codified at 16 U.S.C. §§ 3839aa to 3899aa-9). The Conservation Title reauthorized and amended a number of conservation programs, including EQIP, enacted in prior agricultural legislation.

313. 16 U.S.C. § 3841(a)(6). Congress does not always appropriate the full authorized

production are to receive 60% of EQIP funding.<sup>314</sup> Payments to an individual or entity are limited to \$450,000 for all contracts entered during fiscal years 2002 through 2007.<sup>315</sup>

EQIP authorizes contracts, lasting from one to ten years, with producers who agree to implement eligible environmental and conservation practices in exchange for cost-share and incentive payments, as well as technical assistance. "Practice" is defined to include structural practices (including animal waste management facilities), land management practices (including nutrient and manure management), and comprehensive nutrient management planning practices.<sup>316</sup> A livestock producer whose plan of operation includes an animal waste storage or treatment facility is eligible for cost-share payments if, along with other requirements, that producer develops and implements a comprehensive nutrient management plan.<sup>317</sup> The producer may also be eligible for incentive payments to encourage development of the nutrient plan,<sup>318</sup> required by CAFO regulations. Incentive payments for practices already required by law could be questioned under the PPP.

*b) Conservation Security Program*

The Conservation Security Program (CSP),<sup>319</sup> enacted in the 2002 Farm Bill,<sup>320</sup> may provide a U.S. example of the provider gets principle. Though CSP funding has been the victim of budget cuts and reallocation, the program is designed to pay producers on working land to adopt or maintain conservation practices that help to protect or improve the quality of soil, water, air, energy, plant and animal life, and for other conservation purposes. Eligible producers develop conservation stewardship plans and enter contracts that set out the required conservation practices.<sup>321</sup> Three tiers of conservation

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funding amount for this and other programs, and conservation programs often bear the burden of budget reductions.

314. 16 U.S.C. § 3839aa-2(a), (e), (g).

315. *Id.* § 3839aa-7. Since fiscal year 2003, however, EQIP payments, like many other conservation payments, may not be made to an individual or entity whose average adjusted gross income for the previous three years exceeds \$2.5 million, unless at least 75% of that income came from farming, ranching, or forestry. 7 U.S.C. § 1308-3a (Supp. III 2003).

316. 16 U.S.C. § 3839aa-1(3), (5), (6); 7 C.F.R. § 1466.3.

317. 16 U.S.C. § 3839aa-5(a)(3); 7 C.F.R. § 1466.9(c).

318. 7 C.F.R. § 1466.23(b). One might question the wisdom of incentive payments, especially for producers required to develop and implement CNMPs under NPDES regulations.

319. 16 U.S.C. §§ 3838-3838c; 7 C.F.R. pt. 1469.

320. Farm Security and Rural Investment Act of 2002, Pub. L. No. 107-171, 116 Stat. 134 (2002).

321. Many conservation practices are eligible, including land and nutrient management practices, wildlife conservation, invasive species management, and erosion control measures. 16 U.S.C. § 3838a. Land-based practices are preferred, and construction of animal waste

contracts impose increasingly stringent requirements. Tier III, the most stringent, involves contracts for five to ten years and requires producers to apply a conservation plan for all resources of concern on the entire agricultural operation. In exchange, producers receive a base payment and a share — normally 75%, but for beginning farmers 90% — of the cost of adopting or maintaining the required conservation practices.<sup>322</sup>

Practices eligible for compensation must go beyond a statutory reference level, the minimum cross-compliance (that is, highly erodible land and wetlands protection) required for receipt of federal farm program payments.<sup>323</sup> Thus, the CSP is a U.S. example of application of the provider gets principle.

### VIII. Conclusion

The PPP, which originated as an economic principle, has gained acceptance as a principle of law. When applied, the principle can be effective “to avoid wasting natural resources and to put an end to the cost-free use of the environment as a receptacle for pollution.”<sup>324</sup> Environmental statutes and regulations in the United States and in other nations help to implement the principle, though often its application is implicit rather than explicit.

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storage or treatment facilities is not eligible. *Id.* § 3838c(b)(3). Land enrolled in the CRP, WRP, and grasslands reserve program and some newly cultivated land is not eligible. *Id.* § 3838a(b)(3).

322. *Id.* § 3838c. The base payment is a percentage of the average national per-acre rent for a specific land use. *Id.* § 3838c(b)(1)(A). Tier I contracts receive 5% of the base payment; Tier II, 10%; Tier III, 15%. *Id.* § 3838c(b)(1)(C)-(E). Producers may receive enhanced payments for multiple practices that exceed minimum requirements or other activities that improve conservation. *Id.* § 3838c(b)(1)(C)(iii). Annual payments to individuals or entities are limited: Tier I, \$20,000; Tier II, \$35,000; Tier III, \$45,000. *Id.* § 3838c(b)(2)(A).

323. 16 U.S.C. § 3838c(c). On the reference level, see *supra* text accompanying notes 235-37. This limitation is analogous to the approach to agri-environment payments under Council Regulation 1257/1999, 1999 O.J. (L 160) 80. “Agri-environmental commitments shall involve more than the application of usual good farming practice. They shall provide for services which are not provided for by other support measures, such as market support or compensatory allowances.” *Id.* art. 23, at 90. This language has been amended since original enactment, but the requirement remains. See also Agriculture Guidelines, *supra* note 97.

324. OECD, *PPP Analyses*, *supra* note 1, at 9. The OECD noted that the PPP is designed not to punish polluters but to set appropriate signals in place in the economic system so that environmental costs are incorporated in the decision-making process and hence arrive at sustainable development that is environment-friendly. . . . A degree of environmental pollution will certainly persist, and the consumer will bear the cost initially charged to the polluter. But use of the Polluter-Pays Principle will secure economic efficiency and will reduce distortions in international trade and investment to a minimum.

*Id.*

Application of the principle to some emissions from agriculture, however, has been delayed. This delay can be explained in part by the nature of agricultural production and its diffuse emissions. Long-standing attitudes towards agriculture and long-recognized property rights may also play a role. If agricultural production continues to intensify, the polluter pays principle may demand more internalization of pollution costs from agriculture.