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Agriculture and the Polluter Pays Principle[*]

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1. 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.[2] The PPP now plays an important role in national and international environmental policy. The European Community (EC) adopted the principle in the 1987 Single European Act,[3] and it has appeared in international agreements, including the Rio Declaration of 1992.[4] 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.

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[2] Environment Directorate, OECD, The Polluter-Pays Principle: OECD Analyses and Recommendations, at 9, Doc. OCDE/GD(92)81 (1992) [hereinafter OECD, PPP Analyses].

[3] Single European Act, 17 Feb. 1986, 1987 OJ (L 169) 1.

[4] United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, UNCED Doc. A/CONF.151/5/Rev. 1, 31 ILM 874 (1992) [hereinafter Rio Declaration].

The nature of agricultural production makes the PPP difficult to apply, and it therefore does not always apply to agriculture. In many nations, environmental laws do not require agricultural 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 US, for example, new rules for large livestock facilities;[5] in the EC, the Nitrates Directive[6]). Thus, consideration of the polluter pays principle and agriculture is timely, important, and widely relevant.

Agricultural production practices affect the environment. Environmental benefits accompany some agricultural practices,[7] but negative environmental effects also occur. These often involve the introduction of unwanted chemicals (considered pollutants) into the environment and the consequences of alteration of habitat and landscape.[8] The polluter pays principle addresses the 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), emission of substances into the air (e.g., ammonia, particulates, odors), 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 has raised particular difficulties. But, in theory, the PPP should apply when agricultural activities impose environmental harm that affects private and public property.[9]

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.[10] When producers are asked to modify their practices to provide environmental benefits (rather than to avoid harm), subsidies can be justified.[11] Payment for environmental benefits, especially when farmers carry out practices beyond required good farming practices, implements the provider gets principle.

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[5] 40 CFR parts 122, 412.

[6] Council Directive 91/676 concerning the protection of waters against pollution caused by nitrates from agricultural sources, 1991 OJ (L 375) 1.

[7] *See generally* OECD, Environmental Benefits from Agriculture: Issues and Policies (The Helsinki Seminar) (1997). *See infra* text accompanying notes 257-61.

[8] I. Hodge, *Agri-environmental Policy: A UK Perspective*, *in* D. Helm (Ed.), Environmental Policy 216, 219 (2000).

[9] For an early analysis of PPP and agriculture, *see* D. Baldock & G. Bennett, Agriculture and the Polluter Pays Principle: A Study of Six EC Countries (1991).

[10] Hodge, *supra* note 8, at 219-20.

[11] *See* OECD, Improving the Environmental Performance of Agriculture: Policy Options and Market Approaches, at 6, COM/AGR/ENV(2001)6 (2001) [hereinafter Environmental Performance].

The polluter pays principle is only one of several important environmental principles. These include the precautionary principle and the principles of preventive action and rectification of environmental damage at its source.[12] The PPP, of course, is closely related to these other principles, and the focus here on polluter pays is not intended to diminish the importance of the others. Indeed, the principles of precaution and preventive action may, at times, helps to avoid environmental damage that triggers the PPP.

Because the OECD and the EC have acknowledged and developed the PPP, this General Report focuses first on those international organizations. After a review of the OECD development of the principle and the EC adoption of the PPP as a guiding environmental principle, the Report look briefly at its application in international agreements. A consideration of the various meanings of the PPP and a review of its application to agriculture in OECD documents follow. Finally, the General Report synthesizes the contributions of National Reporters, who have analyzed application of the PPP to agriculture in their own nations.

2. OECD and the Polluter Pays Principle

2.1. 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.[13] The OECD, established in 1960,[14] focuses on sustainable growth of economies and improved economic and social well being of citizens of the now-30 member states.[15] Though the original emphasis of OECD was

[12] On these principles in the EU, *see infra* text accompanying notes 60-62.

[13] 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.

H. Ch. Bugge, *The Principles of "Polluter-Pays" in Economics and Law*, *in* E. Eide & R. van den Bergh (Eds.), Law and Economics of the Environment 53, 73-74 (1996). But such a principle would not be a binding rule.

[14] Convention on the Organisation for Economic Co-operation and Development, Paris, 14 Dec. 1960, 12 UST 1728, available at 1961 WL 62596.

[15] Members are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. The OECD enjoys global influence, because it has relationships with numerous other countries and NGOs. *See* http://www.oecd.org.

economic, the environment and agriculture are important components of OECD efforts.[16] The OECD explication of the PPP occurred in the early 1970s, and later documents applied the principle to specific instances of environmental harm.

2.1.1. 1972: Guiding Principles

In the early 1970s, OECD countries, including the US, 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.[17]

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*.[18] 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.[19]

Under the principle, the costs of pollution prevention and control should be included in the price of goods in the marketplace. In general, polluters should not receive subsidies "that would create significant distortions in international trade and investment,"[20] but in special cases, including "transitional periods," non-distorting subsidies can be permitted.[21] The *Guiding Principles* do not identify the optimal level of pollution, but refer instead to an

[16] Other subjects that concern OECD include heath, education, taxation, trade, finance, and even corruption and money laundering. *See* http://www.oecd.org.

[17] OECD, Environmental Principles and Concepts, at 12, Doc. GD(95)124 (1995).

[18] OECD, Recommendation of the Council on Guiding Principles Concerning International Economic Aspects of Environmental Policies, Doc. C(72)128 (26 May 1972), reprinted *in* 11 ILM 1172 (1972) [hereinafter OECD, Guiding Principles].

Early OECD Definitions and Recommendations are collected in OECD, The Polluter Pays Principle 11-20 (1975).

[19] OECD, Guiding Principles, ¶ 4, *supra* note 18, 11 ILM at 1172. The Recommendation include three other guiding principles: environmental standards (the harmonization principle), national treatment and non-discrimination, and compensating import levies and export rebates. *Id*. ¶¶ 6-12, at 1172-73. For a discussion of these principles, *see* C. Stevens, *The OECD Guiding Principles Revisited*, 23 Envtl. L. 607 (1993).

[20] OECD, Guiding Principles, ¶ 4, *supra* note 18, 11 ILM at 1172.

[21] *Id.* ¶ 5.

acceptable state for the environment. They present the PPP as an efficiency principle, aimed at encouraging "rational use" of resources.[22] Thus, the PPP was initially an economic, rather than a legal, principle.[23]

2.1.2. 1973: Note on Implementation

In 1973, the Environment Committee of the OECD drafted a *Note on the Implementation of the Polluter-Pays Principle*.[24] 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."[25] Public authorities must decide the means to implement the principle; these may include "process and product standards, individual regulations and prohibitions" or pollution charges.[26] Subsidies for transitional efforts are exceptions to the principle, provided that the "duration has been laid down in advance" and that international trade is not distorted significantly.[27] An exception could also apply "when steps to protect the environment would jeopardise the social and economic policy objectives of a country or region."[28] Moreover, financial support of research and development does not violate the PPP.[29]

2.1.3. 1974: Recommendation on Implementation

The OECD Council adopted a *Recommendation on the Implementation of the Polluter-Pays Principle* in 1974.[30] This document reaffirmed that "[t]he Polluter-Pays Principle constitutes for Member countries a fundamental principle for allocating costs of pollution prevention

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[22] *Id.* ¶ 4. In fact, the *Guiding Principles* discuss environmental standards and the "tolerable amount of pollution" in a separate section. *Id.* ¶¶ 6-10, at 1172-73.

There is considerable debate as to whether the PPP actually encourages or hinders efficient allocation and use of resources, however. *See* Bugge, *supra* note 13, at 55. 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. Bugge himself seems to view it as a principle of both equity and efficiency.

[23] S. E. Gaines, *The Polluter-Pays Principle: From Economic Equity to Environmental Ethos*, 26 Tex. Int'l L.J. 463, 469 (1991)

[24] OECD, Note on the Implementation of the Polluter-Pays Principle, Doc. Env. (73)32, reprinted *in* 14 ILM 238 (1975).

[25] *Id.* ¶ 2, 14 ILM at 239.

[26] *Id.* ¶ 4, at 239-40.

[27] *Id.* ¶ 7, at 240.

[28] *Id.* ¶ 8, at 241.

[29] *Id*.

[30] OECD, Recommendation of the Council on the Implementation of the Polluter-Pays Principle, Doc. C(74)223 (1974) reprinted *in* 14 ILM 234 (1975).

and control measures introduced by the public authorities."[31] 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."[32]

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 socio-economic problems caused by rapid implementation of stringent pollution control measures;[33] to stimulate "experimentation with new pollution-control technologies";[34] and to promote specific socio-economic objectives when aid has the "incidental effect of constituting aid for pollution-control purposes."[35] 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."[36] Aid should be granted for a limited period of time, and it must not distort trade and investment.[37]

2.2. Later OECD Documents

2.2.1. 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

[31] *Id.* ¶ I.1, 14 ILM at 234.
[32] *Id.* ¶ I.3, at 235.
[33] *Id.* ¶ II.2.
[34] *Id.* ¶ II.3.
[35] *Id.* ¶ II. 4.
[36] *Id.* ¶ III.2(2)
[37] *Id.* ¶ III.2(3).

the principle to accidental pollution from hazardous substances.[38] OECD treatment of the principle during the 1970s had focused only on chronic pollution; neither accidental nor nonpoint source pollution had been addressed explicitly.[39]

Also in 1989, the OECD applied the principle to agriculture, in a document discussed in more detail below.[40]

2.2.2. 1992: Analyses

Soon thereafter, the 1992 publication, *The Polluter-Pays Principle: OECD Analyses and Recommendations*,[41] outlined developments since 1972 and highlighted some of the problems encountered in implementing the principle.[42] Since its initial articulation as a principle of economics, interpretation of the principle moved from pollution prevention and control toward full internalization of pollution costs. Costs covered by the principle now included not only prevention and control,[43] but also administrative measures taken by government, damage caused by pollution,[44] and most accidental pollution.[45]

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

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[38] OECD, Council Recommendation on the Application of the Polluter-Pays Principle to Accidental Pollution, Doc. C(89)88 Final (1989), reprinted *in* 28 ILM 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*. at 1322. The *Recommendation* reviewed 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. Exceptions developed in the 1970s apply to accidental, as well as chronic, pollution. *Id.* at 1322-24.

See also Notes by the Secretariat, OECD, Application of the Polluter-Pays Principle to Accidental Pollution (1989) and Compensation for Victims of Accidental Pollution (1991), *in* OECD, PPP Analyses, *supra* note 2, at 39-42.

[39] OECD, PPP Analyses, *supra* note 2, at 7. In 1982, 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.

[40] OECD, Agricultural and Environmental Policies: Opportunities for Integration (1989) [hereinafter Opportunities for Integration].

[41] OECD, PPP Analyses, *supra* note 2. This document collects earlier Council Acts and explanatory reports.

[42] *Id*. at 8.

[43] 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).

(e.g., the pesticide producer, rather than the applicator) should be considered the polluter.[46] Moreover, though the polluter is responsible for certain costs, the principle does not deal with liability, in the legal sense, because costs may be passed on to another responsible party.[47]

2.2.3. 2001: Expansion

A decade later, OECD continued to focus on the principle, though in a broader context. *The Polluter-Pays Principle As It Relates to International Trade*[48] 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").[49] In its strict sense, the principle requires polluters to pay costs of pollution prevention and control;[50] in the broad sense, the polluter's responsibility extends also to other costs, including charges, taxes, clean-up costs, and compensation.[51]

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[44] *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.

[45] *Id.* at 7-8.

[46] *Id.* at 8.

[47] *Id.* at 9: "Compensation funds financed by potential polluters" do not violate the principle.

[48] Joint Working Party on Trade and Environment, OECD, The Polluter-Pays Principle As It Relates to International Trade, 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, *id*. at 11, 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," citing Environment Directorate, Environment Policy Committee, OECD, Recommendation of the Council on Principles concerning Transfrontier Pollution, Doc. C(74)224 (1974), reprinted *in* 14 ILM 242 (1975).

[49] PPP and Trade, *supra* note 48, 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, ENV/EPOC(2000)13/Rev 4 (2001) (emphasis added) [hereinafter Environmental Strategy].

[50] The original 1972 *Recommendation* is an example of an application of the principle in its strict sense.

[51] PPP and Trade, *supra* note 48, at 12-14. While the OECD itself has not endorsed the PPP in its broad sense, covering "the cost of pollution," the report notes that OECD member countries, in the 1990s, "advocated greater internalisation of pollution externalities" and also that the Rio Declaration and the Stockholm Convention applied the broad version of the principle. *Id.* at 13-15.

The report also analyzed the application of the principle in several OECD member countries individually.[52] Though OECD members generally require pollution prevention and control, some countries continue to subsidize measures to control pollution.[53] Almost thirty years after the 1974 *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.[54]

3. 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.[55] Even without special environmental authority, however, a series of Environmental Action Programmes established the PPP in Community policy. Environmental measures, mostly Directives, had been adopted under other sources of legislative authority, and these measures applied the principle, explicitly or implicitly.[56] 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 formally adopted as an environmental principle in the European Union.

The following discussion reviews the development of the PPP in EC law.

3.1. 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),[57] amending the Treaty of Rome, came into force. The SEA enacted a new title on the environment, which articulated objectives and guiding

[52] *Id.* at 23-26.
[53] *Id*. at 23.
[54] *Id*. at 27-28. The report recommends further research.
[55] For more detail on development of environmental authority in the EC, *see* M. Rosso Grossman, *Agro-environmental Measures in the Common Agricultural Policy*, 25 U. Mem. L. Rev. 927, 937-53 (1995) [hereinafter *Agro-environmental Measures*].
[56] 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, pmbl., 1975 OJ (L 194) 39, 39. Animal and other agricultural wastes were excluded from the directive. *Id.* art. 2, at 40.
[57] Single European Act, 17 Feb. 1986, 1987 OJ (L 169) 1.

principles, authorized environmental legislation, and made environmental protection a component of other European policies. The Maastricht Treaty amended the environment title slightly,[58] and Treaty provisions were later renumbered.[59]

3.1.1. Environmental Principles

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*."[60] 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.[61]

3.1.2. Meaning of the PPP

The Treaty language itself does not provide hard-law answers to questions – 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 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 [are]

[58] Treaty on European Union, 7 Feb. 1992, 1992 OJ (C 191) 1. The Maastricht Treaty also made the integration principle clearer.

[59] Treaty of Amsterdam, 1997 OJ (C 340) 173. In June 2004, EU leaders agreed on the text of a new Treaty establishing a Constitution for Europe. Treaty Establishing a Constitution for Europe, 16 Dec. 2004, 2004 OJ (C 310) 1 (2004) [hereinafter Constitution]. The Constitution would create one Union, replacing the European Communities and European Union; it would govern the Union, replacing the EU and EC Treaties. European Union, Summary of the Agreement on the Constitutional Treaty (28 June 2004) (a non-paper), http://europa.eu.int/constitution/download/oth25064_2_en.pdf. The proposed Constitution would include environmental provisions, arts. III-233 to -234, 2004 OJ (C 310) 1, 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. In May and June 2005, however, both France and The Netherlands rejected the Constitution in national referenda, raising doubts about its success. European Union, Ratification of the Treaty Establishing a Constitution for Europe, http://europa.eu.int/constitution/referendum_en.htm (last visited 16 Mar. 2005).

[60] EC Treaty, art. 174(2) (italics added). Consolidated version of the Treaty Establishing the European Community, 2002 OJ (C 325) 33, 107-08.

The Treaty articulation of the polluter pays 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 "cause" principle) "the French and Portuguese versions yield somewhat more, pairing the concepts of 'polluter,' and 'payer.'" L. Krämer, Focus on European Environmental Law 247 (1992).

[61] EC Treaty, art. 6. *See also* proposed Constitution art. II-97, 2004 OJ (C 310) at 49: "A high level of environmental protection and the 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."

> in principle to be borne by the emittor 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.[62]

3.2. 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 Environmental Action Programme and can be traced through the five subsequent Programmes, which should be seen as amendments to, rather than replacements of, the original document.

3.2.1. First Environmental Action Programme

3.2.1.1. Adopting the PPP

The first Environmental Action Programme (EAP)[63] 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."[64] The First EAP, echoing the OECD, recognized "certain exceptions and special arrangements, in particular for transitional periods," if they "cause no significant distortion to international trade and investment."[65] In the context of economic aspects of measures to control pollution, the EAP refers 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."[66] This suggests that further work would be required to define the "nature, scope and means of implementing the principle," including possible exceptions.[67]

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[62] Krämer, *supra* note 60, at 253.
[63] 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 OJ (C 112) 1 [hereinafter First EAP].
[64] *Id.* Annex, 1973 OJ (C 112) 3, 6. *See* Krämer, *supra* note 60, at 253-54, for the clearer formulation in the Commission proposal for the First EAP.
[65] First EAP, Annex, 1973 OJ (C 112) 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 OECD.
[66] *Id.* at 30.
[67] *Id.* at 32.

3.2.1.2. 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.[68] This document continues to wield influence in the European Community. At the outset, interestingly, it noted that the polluter pays principle had been "adopted" in the 1973 EAP 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.[69]

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. The Communication identified polluters and what they should pay. More precisely than the OECD,[70] the Communication defined the polluter as "someone who directly or indirectly damages the environment or who creates conditions leading to such damage."[71] When identifying the polluter is too difficult (e.g., 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 point of view and which make the most effective contribution towards improving the environment."[72] Standards (e.g., legally binding environmental quality standards) and charges for pollution are appropriate means of preventing pollution.[73] 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."[74]

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[68] Council Recommendation of 3 March 1975, Annex ¶ 3, 1975 OJ (L 194) 1, 2.
[69] *Id.* Annex, at 2.
[70] *See* PPP and Trade, *supra* note 48, at 11: "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."
[71] Recommendation, Annex ¶ 3, 1975 OJ (L 174) 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.
[72] *Id*. Annex ¶ 3, at 2. Kramer identifies this as an economic, rather than a legal formulation. Kramer, *supra* note 60, at 255.
[73] Recommendation, Annex ¶ 4, 1975 OJ (L 174) at 2-3.
[74] *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.* ¶ 7, at 4.

3.2.2. Second and Third EAPs

Though the First EAP adopted the PPP, succeeding EAPs interpreted the principle more strictly and enhanced its importance.[75] The Second EAP,[76] published in 1977, restates the PPP in language similar to the First EAP.[77] In its focus on economic aspects, the EAP refers explicitly to the 1975 Council Recommendation discussed above. The Second EAP recognizes the need for more study of the application of the principle, especially as it governs systems of charges and transboundary pollution.[78]

In 1983, the Third EAP,[79] though significantly shorter, provides somewhat greater detail about the PPP. It discusses the principle in the context of optimal resource allocation and points to its "decisive importance." Using market forces, it "constitutes [an] incentive … [for polluters] to reduce pollution caused by their activities and to discover less polluting products or technologies."[80] Relying, like the Second EAP, on the 1975 Recommendation, the Third EAP reiterates the importance of subjecting polluters to standards or charges and reviews the exceptions, limited in both time and scope, to the PPP.[81] 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 aids may be needed and are normally given to local authorities or voluntary organizations.[82] 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.[83]

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[75] Ch. W. Backes *et al*., Codificatie van milieurechtelijke beginselen in de Wet milieubeheer 102 (2002).
[76] 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 OJ (C 139) 1 [hereinafter Second EAP].
[77] *Id.* Annex I ¶ 17, at 6.
[78] *Id.* at 38.
[79] 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 OJ (C 46) 1.
[80] *Id.* Annex, at 7 (both quotations).
[81] This echoes the OECD's recommendations about exceptions. Two Commission decisions (1974, 1980) had established that a Member State might grant aids to ease introduction of new environmental regulations under certain conditions, until 1987. *Id.* at 7.
[82] *Id.*
[83] *Id.*

3.2.3. Fourth and Fifth EAPs

The Fourth EAP,[84] from 1987, was published after the Single European Act[85] had made the PPP part of the Treaty. Thus, this Programme reaffirms the environmental principles and the integration principle set out in the SEA. The Fourth EAP notes that economic instruments for pollution control must be consistent with the principle and refers yet again to the 1975 Recommendation. The Commission was studying the possibility of extending the deadline (originally the end of 1986) for transitional state aids for pollution control measures.[86]

The Fifth EAP,[87] adopted in 1993, focuses on sustainable development and therefore does little to develop the PPP. Instead, it seems to take the principle as a given, informing other measures; the Programme even assumes that, with correct implementation of the principle, some measures should pay for themselves. This EAP advocates economic instruments that would "internalize all external environmental costs incurred during the whole life-cycle of products."[88] In a comment that seems to move away from strict application of the principle, the Fifth EAP, discussing state aids compatible with the PPP, notes the "growing importance of subsidies for particular types of environmental expenditure."[89]

Interestingly, the Fifth EAP also promises 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."[90] This anticipates the environmental liability measure discussed below.[91]

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[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 OJ (C 328) 1 [hereinafter Fourth EAP].
[85] 1987 OJ (L 169) 1.
[86] Fourth EAP, *supra* note 84, Annex, 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] *Id.* at 71.
[89] *Id.* at 72.
[90] *Id.* at 82. The EAP also notes that a "comprehensive review of fines and penalties" should be completed prior to the end of 1993. *Id.* at 81.
[91] *See infra* text accompanying notes 134-49.

3.2.4. Sixth EAP

Finally, the Sixth Environmental Action Programme,[92] 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 particularly on the polluter-pays principle" and the other EC environmental principles.[93] Environmental objectives must be met in light of these principles.[94] Promotion of sustainability, which will internalize both negative and positive impacts on the environment, must also implement the environmental principles, including the PPP.[95]

3.3. State Aid for the Environment

EU policies on state aid for the environment consider both the polluter pays principle and free competition.[96] 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."[97]

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[92] Decision No 1600/2002 of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme, 2002 OJ (L 242) 1.
[93] *Id.* art. 2(1), at 3.
[94] *Id.* art. 2(3).
[95] *Id.* art. 3(4), at 5. An earlier proposal for the Sixth Programme, provided more detail. Article 3 of that draft, "Strategic approaches to meeting environmental objectives," would have listed "to promote the polluter pays principle … to internalize 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, COM (2001) 31 final, at 74.
[96] 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. EC Treaty, art. 36. *See* Community Guidelines for State Aid in the Agriculture Sector, 2000 OJ (C 28) 2, 3 [hereinafter Agriculture Guidelines].
[97] L. Krämer, E.C. Treaty and Environmental Law 69 (3d ed. 1998).

3.3.1. Community Guidelines

In 1994, the Commission published its Community Guidelines on State Aid for Environmental Protection.[98] These were followed, in 2001, by a new set of Community Guidelines.[99] More extensive and more detailed, these Guidelines insist that policymakers consider the effects state aid may have on sustainable development and on "full application" of the polluter pays principle.[100] Aid that aims at a high level of environmental protection, with full internalization of costs,[101] may be permitted, while aid that merely helps polluters to comply with mandatory standards may violate the PPP.[102] 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."[103]

3.3.2. Guidelines for the Agriculture Sector

These general guidelines, however, do not apply to the agriculture sector.[104] Instead, agriculture follows a separate regime, set out in Community Guidelines for State Aid in the Agriculture Sector.[105] For agriculture, state aid is justified only if it respects the objectives of the Common Agricultural Policy (CAP),[106] which must integrate environmental considerations.[107] The CAP, however, "was not designed as an environmentally friendly

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[98] Community guidelines on State aid for environmental protection, 1994 OJ (C 72) 3. The guidelines balanced the requirements of fair competition and environmental policy; aid could be justified when environmental benefits outweigh harmful effects on competition (¶ 1.6). The guidelines, extended several times (lastly at 2000 OJ (C 184) 25), remained valid until 31 December 2000. They did not apply to agricultural aid governed by Council Regulation 2078/92, 1992 OJ (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, *Agro-environmental Measures*, *supra* note 55, at 1026-38 (discussing the accompanying measures).

[99] Community guidelines on State aid for environmental protection, 2001 OJ (C 37) 3 [hereinafter Community Guidelines].

[100] *Id.* at 3, ¶ 4.

[101] A definition explains: "in 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.* at 3, ¶ 6. The guidelines are intended, in part, to ensure that environmental aids do not disrupt competition and economic growth. *Id.* at 3, ¶ 5.

[102] *Id.* at 3, ¶ 4.

[103] *Id.* at 6, ¶ 20. The guidelines note, in §19, that the 1994 Community guidelines, *supra* note 98, allowed aid on a temporary basis when total cost internalization was not possible.

[104] Community Guidelines, *supra* note 99, 2001 OJ (C 37) at 4, ¶ 7. They do apply to fisheries and aquaculture. Under new Agricultural Guidelines for 2007-2013 (para. 49), however, the general guidelines may now apply, in part, to agriculture. *See infra* note 105.

[105] Agriculture Guidelines, *supra* note 96, 2000 OJ (C 28) 2. *See also* Acceptance of Community Guidelines for State Aid in the Agricultural Sector, 2004 OJ (C 263) 8. In December 2006, the Commission published new Community Guidelines for State Aid in the Agriculture and Forestry Sector, 2007-2013, 2006 OJ (C 319) 1. These new Guidelines are not considered here.

[106] EC Treaty, art. 33.

[107] *See* EC Treaty arts. 6, 32-38. Agriculture Guidelines, *supra* note 95, 2000 OJ (C 28) at 4, ¶ 3.9.

policy,"[108] 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.[109]

The Agriculture Guidelines govern more than a dozen types of aid authorized by CAP legislative measures (e.g., investments, for young farmers, early retirement, damage to production, technical support, livestock). Many of these fall under the Rural Development Regulation,[110] which also authorizes aid for environmental undertakings. Under the Guidelines, aid for environmental measures must include special attention to 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."[111] Moreover, 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."[112]

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."[113] Indeed, the 1992 Habitats Directive recognized specifically that "the 'polluter pays' principle can have only limited application in the special case of nature conservation."[114]

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."[115] Exceptions must be justified, *e.g.*, for new national environmental requirements that go beyond Community requirements or development of biofuels, but these aids must be temporary (no more than five years) and degressive.[116]

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[108] P. M. Barnes & I. G. Barnes, *Understanding the Costs of an Environmentally 'Friendly' Common Agricultural Policy for the European Union*, 11 Eur. Env't 27, 35 (2001).

[109] For detail on the PPP and the European Union, *see* M. Cardwell, *The Polluter Pays Principle in European Community Law and Its Impact on United Kingdom Farmers*, 59 Okla. L. Rev. 89-113 (2006).

[110] Council Regulation 1257/1999, 1999 OJ (L 160) 80, as amended (consolidated version at CONSLEG 1999R1257 – 01/05/2004). This Regulation will be replaced in 2007 by Council Regulation 1698/2005, 2005 OJ (L 277) 1.

[111] Agriculture Guidelines, *supra* note 96, 2000 OJ (C 28) at 8, ¶ 5.1.3.

[112] *Id*. at 9, ¶ 5.3.4.

[113] *Id.* at 10, ¶ 5.4.2. The Guidelines, *id*. ¶ 5.4.1, refer to Regulation 1257/1999, art. 16, which allows payments for farmers who are restricted in connection with the Wild Birds Directive, Council Directive 79/409, 1979 OJ (L 103) 1, as amended, and the Habitats Directive, Council Directive 92/43, 1992 OJ (L 206) 7, as amended.

[114] 1992 OJ (L 206) 7, 8.

[115] Agriculture Guidelines, *supra* note 96, 2000 OJ (C 28) at 10, ¶ 5.5.1.

[116] *See id.* ¶ 5.5.4 on rules for tax reductions.

Special rules, which may conflict with the PPP, apply to small and medium sized enterprises.[117] In certain circumstances – e.g., investments in 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 protection and improvement of the environment.[118]

3.3.3. BSE Guidelines

Separate guidelines followed the crisis caused by Bovine Spongiform Encephalopathy (BSE).[119] 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 carries a low risk for distorting competition and may be critical for protecting human health; therefore aid to producers, with limits, can be permitted.[120] State aid to slaughterhouses could distort competition and, after a transition period, is generally prohibited.[121] It is noteworthy that the effect on competition helps to explain the difference in policy between producers and slaughterhouses.

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117 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 OJ (L 1) 1. Small and medium enterprises are defined by size (fewer than 50 or 250 employees) and annual turnover or balance sheet, in Commission Regulation 70/2001 on the application of Articles 87 and 88 of the EC Treaty to State aid to small and medium-sized enterprises, Annex I, 2001 OJ (L 10) 33, 39. The latter does not apply to agricultural enterprises. *Id*. art. 1(2)(a), at 35. In December 2006, the EC published Commission Regulation 1857/2006 on the application of Articles 87 and 88 of the Treaty to State aid to small and medium sized enterprises active in the production of agricultural products, 2006 OJ (L 358) 1. The Regulation applies from 2007 to 2013.

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

119 Community guidelines for State aid concerning TSE tests, fallen stock and slaughterhouse waste, 2002 OJ (C 324) 2 [hereinafter TSE Guidelines]. Guidelines apply from 1 Jan. 2003 until 31 Dec. 2013. BSE or "mad cow disease" is a transmissible degenerative neurological disease in cattle. It is a type of transmissible spongiform encephalopathy (TSE), a family of degenerative diseases of the central nervous system, believed to be caused by self-replicating proteins called "prions." *See* WHO, Bovine spongiform encephalopathy, Fact Sheet No. 113 (2002). BSE was identified as a neurological disease of cattle in the UK in 1986, and as of mid-September 2006, more than 180,000 infected cattle had been identified in Great Britain. As of the same date, eight infected cows had been discovered in Canada and three in the US. BSE has been linked to variant Creutzfeldt-Jakob disease (vCJD) in humans, a fatal neurological disease described in the UK in 1996. Regulations that ban the use of ruminant proteins in feed for ruminants have helped to slow the spread of BSE, and restrictions on the use of specific risk materials from cattle in food for humans are intended to prevent vCJD.

120 TSE Guidelines, *supra* note 119, at 4-5.

121 *Id.* at 5-6.

3.4. 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.[122] In 2004, the Community enacted a Directive on environmental liability.[123]

3.4.1. 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.[124] The *Green Paper* considers 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* invokes the PPP, noting that "civil liability is a means for making parties causing pollution to pay for the damage that results."[125] It wrestles with the question of what constitutes environmental damage, including the "what is pollution" question that is often asked in the context of polluter pays.[126] A brief survey of Member State legislation indicates that most environmental liability regimes contain elements of strict liability and that courts seemed to favor a strict liability approach in the absence of legislation, as did international instruments.[127]

3.4.2. White Paper

The 2000 *White Paper on Environmental Liability*[128] continued the discussion of liability beyond the *Green Paper*, setting out a structure for EC environmental liability that would implement the polluter pays principle by ensuring that the party in control of an activity is responsible for damage to the environment.[129] 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."[130] By enforcing liability, such a regime would force internalization of

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

123 Directive 2004/35 of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, 2004 OJ (L 143) 56.

124 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 (14 May 1993) [hereinafter Green Paper].

125 *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.

126 Green Paper, *supra* note 124, at 10.

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

128 Commission, White Paper on Environmental Liability, COM (2000) 66 final [hereinafter White Paper].

129 *Id.* at 2.

130 *Id.* at 11.

environmental costs and create incentives for extra precautions and for more research to avoid environmental harm.[131] 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,[132] and fault-based liability would apply for damage to biodiversity caused by non-dangerous activities.[133]

3.4.3. Environmental Liability Directive

In April 2004, the Parliament and Council enacted the Directive recommended by the *White Paper*.[134] 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.[135]

Its purpose is "to establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage."[136] The Directive requires Member States to implement its requirements by April 2007; by May 2006, only Italy and Lithuania had done so, though other Member States have prepared draft laws.

3.4.3.1. Environmental damage

Under the Directive, environmental damage is defined narrowly to include damage to certain protected species and natural habitat, generally those protected by the Wild Birds[137] and Habitats Directives[138] or by national nature conservation legislation.[139] Environmental damage

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131 *Id.* at 11-12.

132 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 final, *supra* note 95, at 20. This proposal 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).

133 White Paper, *supra* note 128, at 30.

134 Directive 2004/35, *supra* note 123, 2004 OJ (L 143) 56.

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

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

137 Council Directive 79/409, 1979 OJ (L 103) 1, as amended.

138 Council Directive 92/43, 1992 OJ (L 206) 7, as amended.

139 Directive 2005/35, art. 2(1), 2004 OJ (L 143) at 59.

also includes water damage and land damage.[140] 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.[141] The Directive is not retroactive.[142] Moreover, it does not apply to personal injury, damage to private property, or economic loss,[143] so Member State legislation will continue to redress traditional damage to persons and property.

Member States implement the Directive through a competent authority that acts under national legislation to comply with the Directive.[144] National provisions must require operators (those who carry out the listed activity or hold the authorization for the activity) 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.[145]

3.4.3.2. Application to agriculture

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.[146] In addition, by reference to activities that require environmental permits under the Integrated Pollution Prevention and Control Directive,[147] certain large pig and poultry facilities are also included.[148]

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. 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

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140 *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).

141 *Id.* art 3, at 60.

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

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.

144 *Id*. art. 19(1), at 65.

145 *Id.* arts. 2(6), 6-8, at 60, 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.

146 *Id.* Annex III, at 71. Contained use is governed by Council Directive 90/219, 1990 OJ (L 117) 1, as amended (consolidated version at CONSLEG 1990L0219 – 20/11/2003); deliberate release, by Council and Parliament Directive 2001/18, 2001 OJ (L. 106) 1, as amended (consolidated version at CONSLEG 2001L0018 – 07/11/2003).

147 Council Directive 96/61 of 24 September 1996 concerning integrated pollution prevention and control, 1996 OJ (L 257) 26, as amended (consolidated version at CONSLEG 1996L0061 – 20/11/2003).

148 *Id.* Annex I, ¶ 6.6. Poultry or pig operations require permits if they have more than 40,000 places for poultry, 2,000 places for production pigs over 30 kg., or 750 places for sows.

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 that emission or activity took place.[149]

4. Polluter Pays in International Agreements

Though some would say that the PPP is "rarely acknowledged" in legal instruments other than OECD and EC texts,[150] it does appear in a number of international instruments.[151] In these, the principle may take either a "binding" or a "non-binding" 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.[152] Two international instruments that apply or expand the principle are the 1992 Rio Declaration on Environment and Development,[153] and the Council of Europe's 1993 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (the Lugano Convention).[154]

4.1. 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.[155]

Moreover, Principle 13 indicates that states should develop "national law regarding liability and compensation for the victims of pollution and other environmental damage."[156]

Commentators disagree about the impact of Principle 16. Some would 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

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149 Directive 2004/35, art. 8(4), 2004 OJ (L 143) at 62-63.

150 N. de Sadeleer, Environmental Principles: From Political Slogans to Legal Rules 21 (2002).

151 *See* J. R. 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).

152 De Sadeleer, *supra* note 150, at 23-24 (listing measures with binding and non-binding provisions).

153 Rio Declaration, *supra* note 4, 31 ILM 874 (1992).

154 Council of Europe, Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano, 1993), 32 ILM 1228 (1993).

155 Rio Declaration, Prin. 16, 31 ILM at 879. The Rio Declaration may be the "main reference" for definition of the principle in its "broad sense." PPP and Trade, *supra* note 48, at 37.

156 Rio Declaration, Prin. 13, 31 ILM at 878. Principle 7 of the Rio Declaration, *id*. at 877, assigns a larger burden for sustainable development to developed than to developing countries. This, too, implicates the PPP, because it calls for developed nations to internalize the costs of their emissions. *See* Ch. D. Stone, *Common But Differentiated Responsibilities in International Law*, 98 Am. J. Int'l L. 276, 291 (2004).

equipment by private industry."[157] Another commentator noted, however, that the Rio 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.[158]

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."[159] Even though no specific exceptions are listed, 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 EC formulations and discussions, as the exceptions they have developed seem to have similar goals.[160]

The Rio Declaration version of the PPP favors full internalization of damage costs, as well as expenses for pollution control and prevention.[161] Though the Declaration was not the first embodiment of the Principle that called for the internalization of damage costs, this is still a relatively recent phenomenon.[162]

The related document, Agenda 21: Programme of Action for Sustainable Development, implicitly recognizes the PPP in several provisions.[163] 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."[164]

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157 D. 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 75, at 102. It goes beyond the cost of necessary environmental measures and also includes negative environmental externalities. J. E. Hoitink, *Het beginsel de vervuiler betaalt: 'revival' van een milieubeginsel*, 27(2) Milieu en Recht 30, 30 (2000). In the Rio Declaration, Hoitink says, "[t]he 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 (my translation). Nonetheless, not all negative externalities must to be attributed to the polluter – the PPP is not absolute. *Id*. at 31.

158 De Sadeleer, *supra* note 150, at 25.

159 Rio Declaration, Prin. 13, 31 ILM at 879.

160 Henri Smets discusses the possibility of exceptions, especially the EU and OECD exceptions to the principle, and suggests that guidance be drawn from these. H. Smets, *The Polluter Pays Principle in the Early 1990s*, *in* L. Campiglio *et al*. (Eds.), The Environment after Rio: International Law and Economics 131, 137-41 (1994).

161 *Id.* at 140.

162 *Id.* at 143.

163 United Nations Conference on Environment and Development, Agenda 21: Programme of Action for Sustainable Development, UNCED document A/Conf.151/26, at ¶¶ 2.14, 30.3.

164 *Id*. ¶ 32.5.d:

> To 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.

4.2. Lugano Convention

The Lugano Convention[165] is intended to ensure adequate compensation for damage from activities that pose danger to the environment.[166] 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 … ."[167] The Lugano Convention defines both damage and the environment broadly,[168] 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 (e.g., insurance), but anticipates no compensation fund.[169] 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."[170]

Though the Lugano Convention would apply the PPP in a strict-liability context, only nine countries have signed it, and 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.[171]

5. 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."[172] Moreover, despite the "simplicity" of the PPP, "[t]he more one attempts to refine its definition, the more elusive the principle becomes."[173] The PPP invites questions about its meaning and scope.

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165 Lugano Convention, *supra* note 154, 32 ILM 1228. The Convention refers to Principle 13 of the Rio Declaration, which directs States to develop national law to compensate victims of pollution. *Id.* pmbl., at 1230.

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

167 *Id*. pmbl., at 1230.

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

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

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

171 *Id.* at 16.

172 Hoitink, *supra* note 157, at 30 (my 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." C. Stevens, *Interpreting the Polluter Pays Principle in the Trade and Environment Context*, 27 Cornell Int'l L.J. 577, 577 (1994).

173 De Sadeleer, *supra* note 150, at 60. He continues:

> The polluter cannot be pinpointed, because any act of pollution is the result of the act of production – the

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.[174]

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

5.1. 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.[175] It applied at first to preventive measures by polluters, then was extended to the cost of government administrative actions occasioned by pollution.[176] Its goals have moved from a partial internalization of the costs of pollution (under the OECD's 1970s references to keeping the environment "in an acceptable state") toward full internalization of those costs.[177] 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.[178] Different interpretations of the principle emphasize these approaches.

In its earliest formulation, the 1972 OECD Recommendation, the PPP was an economic principle,[179] rather than a liability principle.[180] It was considered a "cost allocation or non-

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> 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.

174 *Id*. at 21.

175 OECD, PPP Analyses, *supra* note 2, at 9. *See also* De Sadeleer, *supra* note 150, at 22:

> 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.

176 Bugge, *supra* note 13, at 76-77.

177 De Sadeleer, *supra* note 150, at 26 n. 30 & 27.

178 Backes *et al*., *supra* note 75, at 103-04. In this sense, the polluter pays twice. *See generally* L. Bergkamp, *De vervuiler betaalt dubbel: Over de verhouding tussen privaat en publiek milieurecht*, 7 Tijdschrift voor Milieurecht 400 (1998).

179 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 13, at 55. Other economists view the principle as one of equity or as a political no-subsidy principle. *Id.* at 56.

180 The PPP "is *not* a liability principle, but rather is a principle for the allocation of the costs of pollution control." Gaines, *supra* note 23, at 463. *See also* OECD, PPP Analyses, *supra* note 2, at 9:

> 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.

subsidization principle intended to guide governments in addressing domestic pollution."[181] Under this interpretation, sometimes termed the "weak" approach, the principle indicates that polluters should internalize the costs of pollution reduction,[182] 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 to clean up residual pollution in the environment.[183] Corollary goals of the principle are incentives for reduced emission of pollutants and other waste and development of technologies to reduce waste or its harmful effects.[184]

Another interpretation distinguishes implicit and explicit polluter pays principles. The implicit PPP 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 explicit PPP applies when the term (or perhaps the concept) "polluter pays principle" appears in a legal text.[185]

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 (e.g., a multilateral convention), where its role is "to interpret the more precise norms contained in the convention."[186] In some measures, however, the principle is stated in an operative provision and is therefore legally binding.[187]

5.2. 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."[188] The function of *economic integration* avoids distortion of competition. The OECD's early formulations prohibited state aids to pay the costs of pollution control; limited exceptions, for defined

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181 Stevens, *supra* note 172, at 578.

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

183 Nash, *supra* note 151, at 473-77. The situation is more complicated, of course, with multiple polluters or multiple victims. E. Th. 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 pay, in addition, the cost of "the pollution damage done by the remaining optimal effluent." J. Pezzey, *Market Mechanisms of Pollution Control: 'Polluter Pays', Economic and Practical Aspects*, *in* R. K. Turner (Ed.), Sustainable Environmental Management: Principles and Practice 190, 208-09 (1988).

184 Nash, *supra* note 151, at 479. A pedagogical effect may encourage members of the public to take responsibility for their actions. *Id.*

185 Bugge, *supra* note 13, at 58.

186 De Sadeleer, *supra* note 150, at 23.

187 *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.

188 *Id.* at 34.

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 appropriate price is paid. The *preventive* function should abate pollution by "encouraging polluters to reduce their emissions instead of being content to pay charges."[189] 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 provides incentives to avoid harmful pollution and environmental degradation.[190]

5.3. 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."[191] 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.*[192]

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."[193] 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."[194] This version allocates the cost of pollution between polluter and victim, normally making the polluter responsible for the costs of "prevention, restitution and damage."[195] Difficult questions remain, with focus on the nature of pollution,

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189 *Id*. at 36.
190 *Id*. at 34-37.
191 Bugge, *supra* note 13, at 84.
192 *Id*. at 57.
193 *Id.* at 59.
194 *Id.* at 65 (italics omitted).
195 *Id*.

the identity of the polluter,[196] the person who should pay, and what should be paid.[197] As an international principle of harmonization, polluter pays seems to refer to the OECD principle, set out above.[198] 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."[199] OECD member states determine their environmental control policies, so full harmonization of national environmental policy is unlikely; moreover exceptions often apply.[200] The principle of allocation of costs between states raises complex issues of transboundary pollution.[201]

6. 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 non-point sources of pollution.[202] 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.[203] The growing tendency to subsidize environmental outcomes in agriculture thus informs application of the PPP to agriculture.[204] 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

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196 *See, e.g.*, CERCLA, 42 USC § 9607(a), which identifies a broad group of "polluters," the potentially responsible parties, who face extensive liability. *See* Larson, *supra* note 183, 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, the pollution occurs when emissions exceed a governmentally-established threshold. 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. De Sadeleer, *supra* note 150, at 38-40. The latter definition, De Sadeleer believes, is appropriate for its "fairness, appropriateness, and legal coherence." *Id*. at 40.

197 Bugge, *supra* note 13, at 65-76. On these questions, *see also* Ch. S. Pearson, *Testing the System: GATT + PPP + ?*, 27 Cornell Int'l L.J. 553 (1994).

198 *See supra* text accompanying note 19. The 1972 OECD *Guiding Principles* also included a harmonization principle (in section A.b.). *See supra* text accompanying notes 17-23.

199 Bugge, *supra* note 13, at 77 (italics omitted).

200 *Id.* at 75-77.

201 *Id*. at 81-83.

202 *See* J. A. Tobey & H. Smets, *The Polluter-Pays Principle in the Context of Agriculture and the Environment*, 19 World Econ. 63, 64 (1996).

203 *See generally* OECD, Agri-Environmental Policy Measures: Overview of Developments, at 5, COM/AGR/CA/ENV/EPOC(2992)95/final (2003) [hereinafter Agri-Environmental Policy Measures].

204 *Id.* at 6.

environmental outcomes. Moreover, most agricultural activity occurs on privately-owned land, and property law in many nations give farmers broad discretion about use of their land.[205]

6.1. 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.[206] Recognizing the interdependence of agriculture and environment, the OECD takes into account the unique difficulties that 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."[207] 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.[208]

Agricultural activities make up a continuum, ranging from those that cause pollution to others that provide environmental benefits.[209] National policy choices will help to distinguish between polluting and non-polluting 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."[210] Second, adapting a standard exception to the principle, financial assistance can be paid, but only for a pre-determined transitional period, if a new program redefines farmers' environmental obligations and the payments will speed up environmental improvement.[211] Third, to avoid conflict between the PPP and other policies, payments directed toward non-environmental objectives should not be considered payments

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205 Tobey & Smets, *supra* note 202, at 72.

206 Opportunities for Integration, *supra* note 40. *See id.* at 7:

> [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 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.

207 *Id.* at 59.

208 *Id.* at 60.

209 *E.g.*, 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.

210 *Id.* at 60 (underline omitted).

211 *Id*. This consideration is consistent with the EC Agriculture Guidelines, *supra* text accompanying note 116.

for pollution control, even if they enhance environmental values.[212] Farmers who enter legal agreements to provide positive environmental benefits, beyond the requirements of "normal non-polluting agriculture," can be paid for the additional expenses and lost revenues without violating the PPP. Compensation for lost production activities can be paid, but only in specific, limited circumstances.[213]

6.2. Agriculture and Environment

6.2.1. 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."[214] Soon thereafter, in 1993, OECD summarized the progress of its members in improving environmental performance of farming in *Agricultural and Environmental Policy Integration: Recent Progress and New Directions*.[215]

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."[216] Countries may encounter difficulty applying a principle that "runs counter to traditional agriculture-environmental programmes in many developed countries,"[217] especially in cases where producers may expect to receive subsidies for the costs of meeting environmental standards.[218] Technically the principle is difficult to apply to agriculture, especially to non-point source pollution. OECD did recognize a number of "potential" polluter pays policies in member countries. Some nations have enacted regulatory measures and taxes, for example, to encourage pollution control.[219] Even in countries that apply the PPP in principle, though, it is not "strictly applied in practice."[220]

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212 Opportunities for Integration, *supra* note 40, at 61.
213 *Id.* at 62.
214 Communiqué of the Environment Committee Meeting at Ministerial Level, "An Environmental Strategy in the 1990s," SG/Press(91)9 (31 Jan. 1991), cited in PPP and Trade, *supra* note 48, at 34 n. 91 (2002).
215 OECD, Agricultural and Environmental Policy Integration: Recent Progress and New Directions 33 (1993). *See also id*. at 7.
216 *Id.* at 10-11.
217 *Id.* at 33.
218 *Id.* at 17.
219 *Id*. at 11.
220 *Id.* at 81; *see also id.* at 25.

6.2.2. 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*.[221] 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."[222]

This OECD document seems to adopt a "provider gets principle,"[223] 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."[224] Reference levels are

> 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.[225]

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. Of course, the PPP should apply to make farmers accountable when "agricultural activities encroach on public property rights through imposing environmental harm."[226]

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221 OECD, Environmental Performance, *supra* note 11.

222 *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).

223 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.

J. Lindland, 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).

224 OECD, Environmental Performance, *supra* note 11, at 46.

225 *Id.* at 9.

226 *Id.* at 46 (both quotations). *See also id.* at 26 (suggesting that environmental reference levels and property rights differ and evolve).

The *OECD Environmental Strategy for the First Decade of the 21st Century*,[227] also published in 2001, sets goals for agriculture that reinforce both the polluter pays and the provider gets principles (but do not refer to either principle). OECD countries should

> [p]romote 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.[228]

Member countries should promote sustainable and environmentally sound farming practices, and phase out or reform national policies and subsidies that damage the environment.[229]

6.2.3. 2003: Developments

The OECD reviewed policy measures in OECD member countries in its 2003 report, *Agri-Environmental Policy Measures: Overview of Developments*.[230] 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.[231] The report focuses 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.[232] Taxes on estimated off-farm emissions or on the sale of inputs (e.g., farm chemicals) in a few countries seem consistent with the PPP.[233]

6.2.4. 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.[234] 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,[235] 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

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227 OECD, Environmental Strategy, *supra* note 49 (setting out a strategy for sustainable development in a number of sectors).

228 *Id*. at 11.

229 *Id.*

230 OECD, Agri-Environmental Policy Measures, *supra* note 203.

231 *Id*. at 11.

232 *Id.* at 16.

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

234 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].

235 "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.

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.[236]

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, e.g., 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*."[237] In addition, the report calls for "full cost internalisation to stimulate incentives to correct environmental damage and encourage innovation in pollution treatment."[238]

As the OECD had noted earlier, incentive payments dominate agri-environment policy in OECD countries, and few environmental taxes and charges apply. Farmers seem to claim "broad implicit or 'presumptive' rights in the use of natural resources."[239] The report therefore calls for more clearly defined boundaries on property rights 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."[240] 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."[241]

7. PPP and Agriculture from National Reports

7.1. Introduction

As the discussion has indicated, the polluter pays principle applies, at least in theory, to agriculture. Thus, consideration of its impact on agriculture in national law is relevant in

236 *Id*. at 19-23.
237 *Id.* at 25.
238 *Id.* at 24.
239 *Id.*
240 *Id.*
241 *Id.* at 7.

the context of both agricultural and environmental law. National Reporters have analyzed application of the principle to agriculture in seven EU Member States and one EU candidate country, as well as two North American countries.[242] The analysis that follows relies, in the main, on information provided in these National Reports.

For consideration of the PPP here, "agriculture" refers to the production of agricultural products on the farm or in other production areas (e.g., common lands, aquaculture areas). Agriculture includes growing of farm, vegetable and fruit crops, animal and poultry husbandry, dairying, pasturage, apiculture, aquaculture, floriculture, horticulture, nurseries, and viticulture. It focuses on farming practices used in agriculture, whether large scale or small scale, intensive or extensive, family farm or large enterprise.

Agricultural production practices have an effect on the environment, both positive and negative. The PPP, of course, focuses on the environmental risks and effects of agriculture. These environmental risks depend on the nature of production, the geographic environment, and specific management practices, which differ among nations and even in regions within a nation.[243] Moreover, the legal approach to agriculture and environment also varies among nations, though laws in EU Member States, influenced by EC measures, often have similar goals.

7.1.1. Agriculture in Reporting Nations

The situation of agriculture varies among the countries represented. Though in many countries agriculture has declined in importance as an economic sector, it remains a dominant land use and a critical source of food and fiber. Moreover, in some countries, agricultural production is increasingly intensified and specialized, but in others, small farms continue to dominate. Some examples illustrate.

In Greece, for example, agriculture employs 16% of the active population, but the average farm size is 3.5 hectares, and small farms are often composed of several parcels.[244] In Germany, 1.3 million people are employed in primary agriculture (only 3% of workers), but almost half the land is used for agriculture.[245] In Italy, where 56% of the land is used for agriculture, 73% of farms are 5 hectares or smaller, and about 1 million farms raise

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[242] The names of the National Reporters and their countries are listed above, in the introductory note. A few National Reports (Canada, Finland, Greece, US) have been published. For the convenience of readers, references to these Reports will cite to the published versions, rather than to the manuscript versions submitted to the Congress. As of 1 January 2007, Romania is an EU Member State, rather than a candidate.

[243] M.-A. Bowden, *The Polluter Pays Principle in Canadian Agriculture*, 59 Okla. L. Rev. 53-88, at 67-68 (2006).

[244] E. Raftopoulos, *The Polluter Pays Principle and Agriculture in Greece*, 59 Revue Hellenique de Droit International 199-287, at 224 (2006) (Greece).

[245] U. Magnus, *The Polluter Pays Principle in Germany*, at 4, XVIIth International Congress of Comparative Law (2006).

livestock.[246] Under the Italian Constitution, land classed as "agricultural" must be cultivated, but cultivation ranges from extensive to intensive.[247] In Spain, too, rural property owners have the duty to exploit agricultural land for appropriate farming uses.[248] In Slovakia, with a history of collectively organized production, half of agricultural land is farmed by cooperative farms, and half by small and medium sized farmers.[249]

In the US, in contrast, a small percentage of the population works in primary agriculture, but the average farm size is 441 acres (178.6 hectares), and the largest farms (78,000, or 3.7 percent of total farms) average 6308 acres (2555 hectares).[250] Crop and livestock production occupy over 430 million acres (174 million hectares) of cropland and 580 million acres (234.9 million hectares) of pasture and range, with over $200 trillion per year in sales of agricultural products.[251] Canadian agriculture, too, is large scale, with yearly sales of more than $83 billion (Canadian) and a trend toward large, specialized farms.[252]

Moreover, national differences in governmental authority mean that agricultural and environmental issues may be addressed at different levels of government. Most obviously, the European Community enacts both agricultural and environmental measures, and EC law takes priority or influences Member State law. Many agricultural measures are Regulations, effective throughout the EC, though some aspects involve significant Member State cooperation. Most environmental measures are Directives, which require implementation in Member State law.

In individual Member States, both national and regional legislation may be relevant for application of the PPP. In Italy, for example, regions are the competent authorities for agriculture and land management.[253] In Germany, some federal environmental laws establish a framework, supplemented by *Länder* statutes that specify details (and, in the case of Water Acts, include the PPP).[254] In Spain, the Constitution assigns legislative competencies both to the state and to Autonomous Communities (ACs). The state enacts basic legislation (the legal framework) to protect the environment, while ACs have competence for the "management of

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246 A. Germanò, *Italian Report on Agriculture and the Polluter Pays Principle*, at 13, XVII[th] International Congress of Comparative Law (2006).

247 *Id*. at 4.

248 D. Llombart Bosch & P. Amat Llombart, *Spanish Presentation on the Subject: Agriculture and the Principle that 'He Who Contaminates Pays'*, at 16, XVII[th] International Congress of Comparative Law (2006). *See, e.g*., the Canary Islands Law on the Management of Land and Natural Areas, Council 1/2000, 8 May 2000.

249 M. Stefanovic, *Agriculture and the Polluter Pays Principle in Law of the Slovak Republic*, at 3, 17[th] International Congress of Comparative Law (2006).

250 National Agricultural Statistics Service, USDA, 2002 Census of Agriculture 58-59, 214 (Tables 55 & 61) (2006).

251 V. P. Nanda, *Agriculture and the Polluter Pays Principle*, 54 Am. J. Comp. L. 317-339, at 317 (2006 supp.).

252 Bowden, *supra* note 243, at 67.

253 Germanò, *supra* note 246, at 13.

254 Magnus, *supra* note 245, at 13.

environmental matters" and can require additional protection. ACs have exclusive authority over agriculture, livestock, mountains, and forests.[255] In Hungary, with centralized legislative power, Parliament and the Central Government adopt environmental protection laws.[256]

In the US, both federal and state law govern environmental matters. Federal laws set minimum national standards for environmental protection and authorize state implementation of some provisions under a system of cooperative federalism. State laws normally meet federal law requirements, but in most matters, states may enact more stringent standards. In Canada, likewise, both the federal government and the provinces enact environmental laws.

7.1.2. Environmental Effects of Agriculture

In a 2004 report, the OECD evaluated the environmental performance of agriculture[257] and noted that

> agriculture has a complex relationship with natural resources and the environment, and attributing specific environmental effects to agriculture is difficult and not fully understood. Agriculture is a major user of land and water resources yet needs to maintain the quantity and quality of those resources in order to remain viable. Agriculture generates waste and pollution yet it also conserves and recycles natural resources, and changes landscapes and habitats for wildlife. Many of the environmental effects are confined to the sector itself, but off-farm effects are also important. The impacts are often concentrated locally and regionally, although some are of national and international significance.[258]

The OECD indicated that intensification of agriculture has caused environmental harm, including water and air pollution, as well as the "loss of wildlife, habitats and landscape features."[259] Impacts of agricultural production include wind and water soil erosion from tilling or over grazing; water pollution from fertilizers,[260] including manure, and pesticides; excessive groundwater extraction; air pollution from ammonia, pesticide drift, odors, and gaseous emissions; and loss of biodiversity.[261] National Reports generally agree with this OECD evaluation. As reflected in the National Reports, these problems exist, though to different degrees, in the US,[262] Canada,[263] and EU Member States.[264]

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255 Llombart & Amat, *supra* note 248, at 4-5, 11. Court decisions have increased the level of state competency in environmental protection.

256 C. Csak, *The polluter pays principle in the agriculture: Hungarian National Report*, at 11, XVII[th] International Congress of Comparative Law (2006). Authors of the Hungarian report include P. Bobvos, K. Horvath, I. Olajos, T. Prugberger, J. Ede Szilagyi, N. Jakab, and Z. Varga.

257 Lessons Learned, *supra* note 234.

258 *Id*. at 10.

259 *Id*. at 12.

260 For example, a recent Environmental Working Group study found that runoff of nitrogen fertilizer in the Mississippi River Basin has caused a large "dead zone" in the Gulf of Mexico. The report blamed fertilizer for 70% and animal waste for 12% of the nitrate pollution. Environmental Working Group, Dead in the Water (2006), http://www.ewg.org/reports/deadzone/.

261 Lessons Learned, *supra* note 234, at 12-13.

262 Nanda, *supra* note 251, at 323-25.

263 Bowden, *supra* note 243, at 68.

264 *E.g*., E. H. Nordberg, *Agriculture and the Polluter Pays Principle in Finnish Law, Especially Concerning Legal Aspects of Water Protection against Diffuse Pollution, in* E. J. Hollo (Ed.), Finnish Legal System and

Several characteristics of agricultural emissions should be noted. Unlike emissions from many other sectors, emissions from agriculture are often diffuse and include runoff from livestock production and field cultivation, both difficult to monitor.[265] Legal mechanisms effective in other sectors may be less effective for many types of agricultural emissions. Causation is often difficult to establish, which hampers allocation of responsibility. Indeed, the EC Environmental Liability Directive recognized that "[n]ot all forms of environmental damage can be remedied by means of the liability mechanism … . Liability is therefore not a suitable instrument for dealing with pollution of a widespread, diffuse character, where it is impossible to link the negative environmental effects with acts or failure to act of certain individual actors."[266] For diffuse pollution, indirect instruments, like regulation of inputs, permits, or management incentives, may be more effective.[267]

In addition, agriculture is relatively unique because it has the ability to recycle many of its own waste products. The majority of agricultural wastes, including manure and vegetable matter, can be reused, providing that proper procedures are followed.[268] Yet reuse of agricultural wastes, when handled improperly, causes environmental pollution. Legal measures address these effects in many nations.

Moreover, agriculture operates under special circumstances because of the physical nature of farming, which relies on soil and water for production. The farmer's misuse of inputs like fertilizers and pesticides affect the farm and its productivity. If pollutants escape and damage soil and water, these often harm the farm itself, as well as land and waters beyond the farm boundary. Thus, as the Italian Report notes, the " 'clash' between the farmer's concern to maximise yield and the concern of society to have a healthy environment is actually much less 'harsh' than" in other industries.[269]

7.2. Adoption of the Polluter Pays Principle

International, national, and even regional laws illustrate the adoption of the PPP. National Reports indicate that the principle has been accepted as an explicit part of legislation or as an implicit rationale for environmental regulation and allocation of liability for pollution. That is, some environmental laws use the term, or perhaps the concept, explicitly, while others establish rules that require the polluter to pay for environmental damage.[270]

Recent Development 134-176, at 136, 150 (2006).

265 *See id.* at 136, 143.

266 Directive 2004/35, pmbl. (13), 2004 OJ (L 143) 56, 57.

267 Nordberg, *supra* note 264, at 143-44.

268 Germanò, *supra* note 246, at 7.

269 *Id*. at 4.

270 *See supra* text accompanying note 185.

One National Report identified three levels of development of the PPP. First-level development ("civil liability implementation") refers to the "individualistic formulation" of the principle and its implementation through civil-law liability. Second-level development ("liability regime specification") refers to environmental liability and compensation regimes that apply to individual operators. Third-level development ("partnership regime specification") refers to creative schemes, often involving compensation, in which the operator is an environmental partner (or failed partner).[271] Though the Report referred to Greek application of the PPP and agriculture, it would seem to apply in other nations whose laws impose statutory liability, allow victims to pursue claims for damages, and compensate farmers who protect the environment.

7.2.1. International Agreements

International environmental agreements include formulations of the PPP,[272] and nations that have adopted multilateral environmental agreements are bound to be guided by the principle. For example, the Greek Report cites the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (1976, as amended), which imposes the obligation to apply the polluter pays principle, "by virtue of which the costs of pollution prevention, control and reduction measures are to be borne by the polluter, with due regard to the public interest."[273] Another example is the Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992), under which Parties are to be guided by the PPP.[274] Spanish law acknowledges the importance of environmental principles included in the Rio Declaration, which adopts the PPP, and the related Agenda 21.[275] Other international measures, e.g., the Convention on Biological Diversity (1992) and the Cartagena Biosafety Protocol (2000), suggest a linkage to the PPP.[276] In Canada, international environmental measures (e.g., the Rio Declaration) have served as "interpretive tool[s]" in applying the PPP.[277]

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271 Raftopoulos, *supra* note 244, at 199.

272 Agriculture is often considered a rather local activity; it has few effects that will harm the environment in neighboring countries; thus, no special international conventions address agricultural pollution specifically. Magnus, *supra* note 245, at 3.

273 Barcelona Convention, art. 4(3)(b), cited by Raftopoulos, *supra* note 244, at 216.

274 Helsinki Convention, art. 1(1), cited by Raftopoulos, at 220. Article 7 of the Convention requires rules for responsibility and liability.

275 *E.g.*, in Law 10/1998 regarding residues, pmbl., cited in Llombart & Amat, *supra* note 248, at 9. On the Rio Declaration, *see supra* text accompanying notes 155-64.

276 Raftopoulos, *supra* note 244, at 222-24.

277 Bowden, *supra* note 243, at 56.

7.2.2. The European Community

In EU Member States, of course, the PPP is enshrined in the EC Treaty and must be integrated into the definition and implementation of Community policies, including agriculture.[278] Thus Member States must "apply and interpret norms relating to the environment, taking into account the importance and value of the principle,"[279] to avoid breaching the Treaty provision[280] that requires Member States to comply with EC law. Moreover, EC measures are part of an "ever more sophisticated and intrusive system"[281] that governs a number of environmental issues, and these measures guide or influence Member State law.

A few examples from National Reports indicate that Member States have adopted the principle, either explicitly or implicitly. Later sections of this General Report provide more details. In Germany, the PPP is stated explicitly in a number of laws, including the Federal Soil Protection Act[282] and the Federal Nature Protection Act.[283] Even before EC adoption of the principle, however, the PPP was a "cornerstone" of German law, which assigned the costs for protecting the environment from harmful effects to those who carried out harmful activities.[284] Both public enforcement, through prohibition or permitting of activities with sanctions for violations, and private enforcement, through private cases brought by victims of pollution, implement the principle.

The Spanish Constitution of 1978 adopted the PPP in its extensive provision on the environment, even before its formal adoption in the EC Treaty.[285] The principle, which has applied in Spain for decades, is reflected (explicitly or implicitly) in environmental laws of the state and Autonomous Communities that require prevention of harmful emissions and compensation for damage from pollution.[286]

Finland has applied the PPP in a number of environmental laws, including the Environmental Protection Act and the Act on Compensation for Environmental Damages, both discussed below.[287] Italian environmental laws, too, indicate that whoever has

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278 EC Treaty arts. 6, 174. *See supra* text accompanying notes 60-62.
279 Germanò, *supra* note 246, at 1.
280 EC Treaty art. 110, cited by Germanò, at 1.
281 Germanò, at 6.
282 *Bundesbodenschutzgesetz*, 17 Mar. 1998, § 4 para. 3, BGBl. 1998 I 502, cited in Magnus, *supra* note 245, at 1-2.
283 *Bundesnaturschutzgesetz*, 25 Mar. 2002, § 19, BGBl. 2002 I 1193, cited in Magnus, at 2.
284 Magnus, at 2.
285 Constitution, art. 45, described by Llombart & Amat, *supra* note 248, at 2, 3.
286 Llombart & Amat, at 2.
287 Nordberg, *supra* note 264, at 145-48, 164-67.

"compromised" the environment (that is, the polluter) must pay damages to the state.[288] In Greece, the principle "emanates from" the right to environment articulated in the Constitution[289] and is accepted in the Law on Protection of the Environment.[290]

In Hungary, the Act on the General Rules of Environmental Protection (a framework law) accepts the principle of environmental liability, without expressly adopting the PPP; other laws also impose liability on polluters. The more recent National Environmental Program lists the PPP among the principles accepted as traditional in environmental protection.[291] Despite the clear adoption of the PPP in the EC, legislation in the Slovak Republic has not yet accepted the principle directly. Environmental laws that assign responsibility for pollution implement the principle in some circumstances, though its application is "not sufficient."[292]

In Romania, the PPP is included in the law for protection of the environment.[293] The PPP and related environmental principles are to be implemented by measures including prevention and control of pollution, restoration of polluted areas, education, control of GMOs, and elimination of products harmful to health.[294]

7.2.3. North America

In contrast to the explicit adoption of the PPP in the EC Treaty, the US and Canada take different approaches. The US has never codified the principle formally, but many federal and state environmental laws and common law principles ensure that the polluter pays, at least in some instances.[295] Judicial decisions uphold statutes and regulations that impose liability on polluters, thus implementing the PPP. Important environmental statutes, including CERCLA (the "Superfund" law), the Clean Air Act, and the Clean Water Act, require pollution control and impose sanctions for failure to comply. CERCLA, which allocates liability for cleanup of hazardous substances, may be the clearest example of the PPP in the US.[296] CERCLA imposes strict liability on "potentially responsible parties" for damages from hazardous releases and authorizes coercive methods for compelling the polluter to pay.

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288 Germanò, *supra* note 246, at 1.

289 Greek Constitution, art. 24(1), described in Raftopoulos, *supra* note 244, at 200.

290 Law 1650/1986, art. 29, described in Raftopoulos, at 200-01.

291 Act LIII of 1995, described in Csak, *supra* note 256, at 3, 8.

292 Stefanovic, *supra* note 249, at 1. Environmental law in the Slovak Republic dates only from its independence from the Czech Republic in 1993. Economic growth led to increased pollution, and environmental regulation has developed in response both to environmental conditions and to the Slovak Republic's accession to the European Union. *Id.*

293 Ordonnance d'urgence du Gouvernement nr. 195/2005, art. 3(e), cited by M. Uliescu, *L'Agriculture et le principe le polleuer paye*, at 2-3, XVII[th] International Congress of Comparative Law (2006).

294 O.U.G. nr. 195/2005, art. 4, cited by Uliescu, at 3.

295 M. Rosso Grossman, *Agriculture and the Polluter Pays Principle: An Introduction*, 59 Okla. L. Rev. 1-51, at 39 (2006) and references cited therein [hereinafter *Polluter Pays*].

296 Comprehensive Environmental Response, Compensation and Liability Act, 42 USC §§ 9601-9675, described in Nanda, *supra* note 251, at 319-21.

In Canada, the Supreme Court recognized the PPP as a principle, "firmly entrenched in environmental law,"[297] that requires the polluter to pay costs of prevention, control, and environmental restoration. Lower courts have been less eager to embrace the principle, and its judicial scope is still uncertain.[298] The federal government and provinces share legislative power for agricultural and environmental matters, and environmental statutes at both levels incorporate the PPP, either expressly or implicitly. For example, the Canadian Environmental Protection Act refers to the principle in its preamble, and provincial environmental laws require the polluter to control and remediate contamination.[299] Moreover, most of the Canadian provincial Ministers of the Environment signed the Canada-wide Accord on Environmental Harmonization, which promised that environmental management activities in provinces would reflect the PPP, as well as other principles.[300]

7.2.4. Definition of the Principle

Discussion earlier in this Report indicates that the precise meaning of the PPP is often difficult to ascertain.[301] National Reports corroborate this conclusion. Some national laws provide a definition, but not every nation that implements the PPP has defined it clearly. Indeed, the German Report indicates that the meaning of the principle varies, depending on the context in which it is applied. It expresses an aim of environmental policy, and it applies more clearly to assign civil liability. The PPP indicates that the polluter should bear the consequences of pollution he or she caused, but perhaps also that the polluter should bear responsibility for only the pollution he or she caused.[302]

In Finland, the Environmental Protection Act defines the principle: "It is the duty of parties engaged in activities that pose a risk of pollution to prevent impact and eliminate or minimise harmful environmental effects."[303] Furthermore, the concept of pollution, according

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297 Imperial Oil Ltd. *v.* Quebec (Minister of the Environment), [2003] 2 S.C.R. 624, para. 23, cited in Bowden, *supra* note 243, at 53.

298 Bowden, at 59-61.

299 1999 S.C., ch. 33, pmbl., quoted in Bowden, at 63.

300 Bowden, at 62-63.

301 *See supra* text accompanying notes 172-201.

302 Magnus, *supra* note 245, at 1. *See also Ex parte* Standley and Others, Case 293/97 (29 Apr. 1999), [1999] 2 CMLR 902, ¶¶ 51-53, at 930-31, which indicates that the Nitrates Directive does not require farmers to assume the burden of eliminating pollution they did not create, and therefore does not violate the PPP. *See* M. Rosso Grossman, *Nitrates from Agriculture in Europe: The EC Nitrates Directive and Its Implementation in England*, 27 B.C. Envtl Aff. L. Rev. 567, 621-25 (2000) [hereinafter *Nitrates from Agriculture*].

303 EPA, 86/2000, art. 4, quoted by Nordberg, *supra* note 264, at 138. The Finnish term *aiheuttamisperiaate* means principle of caution, synonymous to German *Verursacherprinzip*. *Id*.

to the Finnish Reporter, includes three elements: human activity, a change in environmental function, and negative impacts of the change.[304] A definition from an EC environmental measure also includes these elements:

> '[P]ollution' shall mean the direct or indirect introduction as a result of human activity, of substances, vibrations, heat or noise into the air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment.[305]

Identifying the responsible polluter may be difficult, for agriculture as for other activities. In Germany, the polluter is normally the operator of an agricultural activity – often, but not always, the owner of the land or facility. But the polluter must have caused the damage directly or profit directly from preventive measures.[306] Similarly, in Italy, the polluter is the agricultural manager – the person who carries out the agricultural activity that causes pollution. The owner of the land is responsible only if that owner's negligent or deliberate behavior caused environmental damage.[307] The definition of the PPP in Finnish law does not indicate who should bear the final costs, but only that the "actor" of the polluting activity must carry out the duty mentioned. Moreover, in cases of soil pollution or resulting groundwater pollution, if the actual polluter cannot be found or charged with responsibility, the holder of the land may be responsible for restoration costs, if that is reasonable.[308]

7.3. Implementation of the PPP in Environmental Law

As the discussion above indicates, most National Reports indicate some level of acceptance of the PPP, and the legislative measures cited above demonstrate this acceptance. The PPP is reflected in national laws in several ways. That is, some environmental laws use a preventative approach – permits, prohibitions, limitations, charges – with consequences for failure to comply. Other laws, using a curative approach, impose civil liability for environmental damage. These two approaches, prevention and liability, may be articulated in the same legislative measure. Moreover, victims of pollution may claim compensation for damages under tort law or through provisions sometimes coupled with civil liability remedies.

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304 Nordberg, at 147.

305 Council Directive 96/61 concerning integrated pollution prevention and control, art. 2(2), 1996 OJ (L 257) 26, 28.

306 Magnus, *supra* note 245, at 15. Court practice interprets the PPP strictly and requires that the PPP apply only to the polluter who is directly responsible for the pollution or who profits from preventive measures. *Id*. at 13.

307 Germanò, *supra* note 246, at 5-6.

308 Nordberg, *supra* note 264, at 138-39, 150.

7.3.1. Public Regulatory Law Measures

As the OECD has stated, "Governments implement the PPP through the application of either command-and-control or market-based regulations, including the imposition of taxes and charges … . These economic instruments are means of implementing the PPP and serve to put pressure on polluters to make judicious use of scarce environmental resources."[309]

7.3.1.1 Prescriptive standards

Public law measures include a number of regulatory techniques that implement the PPP. Limitations on emissions and permit requirements are examples of provisions that require the polluter to assume responsibility under the principle. This type of regulatory measure is common, and a few examples illustrate.

The Environmental Protection Act[310] in Finland applies broadly to pollution of soil, water, and air. It includes a permit system, designed to limit emissions and ensure environmental quality, as well as prohibitions against pollution of groundwater and soil. The EPA assigns to the polluter a number of costs: evaluation of the environmental impact of the activity, prevention or minimization of risk, preventative measures taken by government, and clean up and remediation of polluted soils and waters.[311]

The German Federal Emissions Protection Act requires a license for emissions, which include dust, odors, noise, and vibrations. A license will be granted only if emissions do not significantly harm the general public or neighbors.[312] In an application of the PPP, a licensed operator must bear the cost of measuring and controlling emissions.[313] Italian law, too, includes public law measures to control pollution. One example is the law intended to protect waters from pollution.[314]

The Spanish Law on Water implements the PPP both by provisions that regulate emissions into water and by requirements that those who cause harm to waters must restore them to their previous state. Administrative and penal sanctions may also apply.[315] Implementing the preventive aspect of the PPP, the Spanish measure for environmental impact assessment imposes duties on those who plan certain projects that may affect the environment.

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309 PPP and Trade, *supra* note 48, at 14.

310 EPA, 86/2000, described in Nordberg, *supra* note 264, at 145-50.

311 Nordberg, at 150, 160.

312 *Bundes-Immissionsschutzgesetz*, 14 May 1990, BGBl. 1990 I 881, as amended, described in Magnus, *supra* note 245, at 11.

313 Magnus, at 11. If no license is required, the operator pays costs only if the facility does not comply with the Act and causes "technically avoidable emissions." *Id.*

314 Legislative decree no. 152, 11 May 1999, described in Germanò, *supra* note 246, at 8-9.

315 Law 29/85, 2 Aug. 1985, as amended, described in Llombart & Amat, *supra* note 248, at 7-8.

Autonomous Communities may impose additional requirements.[316] Other EU Member States, of course, have enacted measures for environmental impact assessment; these laws implement the requirements of an EC Directive.[317]

The Greek Law on the Protection of the Environment regulates construction and operation of facilities and, like other nations, Greece requires an environmental impact assessment in some situations.[318] For violation of a requirement or permit, administrative sanctions, including fines or permit revocation, are authorized, as are criminal sanctions.[319] Other Greek laws impose public law requirements – e.g., prohibition of discharges – that implement the PPP.[320]

North American law includes public law measures that require internalization of pollution costs. In the US, which has adopted a resource-specific approach for many environmental laws, statutes and regulations authorize and implement programs to control pollution. Federal prescriptive laws like the Clean Air Act and Clean Water Act establish environmental standards, require permits that impose those standards on individual polluters, require ambient and compliance monitoring, and authorize enforcement of laws, regulations, and duties imposed in permits. States often issue and enforce permits under laws enacted to comply with federal standards. Environmental laws use a variety of regulatory techniques, but by requiring polluters to meet environmental standards at their own expense, these laws implement the PPP.[321]

In Canada, provincial laws prohibit discharge of contaminants into the environment and require those who have caused releases to the environment to control and remediate contamination.[322]

7.3.1.2. Fees and taxes

Polluters in some nations are forced to assume responsibility for their wastes though fees or taxes, either national or local. Fees may be assessed to ensure that the regulated polluter pays at least some of the costs of regulation. For example, under the Clean Air Act in the US, major sources of air pollution must operate under a permit; permit violations result in civil or criminal penalties. States, which usually grant permits, must charge an annual fee "of an amount not less than $25 per ton of each regulated pollutant, or such other amount as …

316 Council Order 1302/1986, 28 June 1986, described in Llombart & Amat, at 9-12.
317 Council Directive 85/337, 1985 OJ (L 175) 40, amended by Council Directive 95/11, 1995 OJ (L 75) 5.
318 Law 1650/1986 (amended by Law 3010/2002), described in Raftopoulos, *supra* note 244, at 200-02.
319 *Id*. arts. 28, 30, described in Raftopoulos, at 202.
320 Raftopoulos, at 203-05.
321 *See* Nanda, *supra* note 251, at 322-23. States, too, have enacted environmental laws.
322 Bowden, *supra* note 243, at 62 and *passim*.

adequately reflects the reasonable costs of the permit program."[323] The 1990 amendments to the Clean Air Act, which instituted the permit program, "followed the PPP's prescriptions with remarkable fidelity."[324]

The OECD noted that

> pollution charges and taxes on polluters are payments in connection with the use of the environment, or damage to the environment and the community, as a result of the pollution emitted. They encourage polluters to protect the environment, although the revenue from these taxes is not necessarily earmarked for environmental protection.[325]

For example, an ecotax in Germany has increased the cost of energy, including petrol, to protect the environment, but a reduced tax applies to petrol used for agriculture.[326] Environmental load charges in Hungary allocate the cost of emissions to air, water, and land on the basis of quantities of emitted substances. These charges are intended to internalize the costs of pollution, but also to encourage potential polluters to invest in measures to reduce emissions. They implement a "user pays" approach to environmental protection.[327] In the Slovak Republic, a waste control law obliges municipalities to collect and dispose of wastes, but does not impose costs directly on those who produce wastes. Instead it authorizes municipalities to collect fees from those who produce waste. The PPP thus applies through local fee regulation, rather than national regulation of wastes.[328] Though some other European nations impose a tax on waste production, the Italian Report notes that no taxes or formal quotas apply to production of agricultural wastes in Italy.[329]

7.3.2. Civil Law Liability

National Reporters have described laws that implement the PPP by assigning civil liability to those whose pollution causes damage to the environment or to individuals. Some nations have general laws that impose civil liability, supplemented by other laws that apply to specific environmental media or activities. Several examples illustrate.

In Germany, the Environmental Liability Act[330] imposes strict liability on owners of certain installations for environmental damage caused to other persons. Causation is presumed, unless the owner can prove that the installation was operated correctly. The law protects

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323 42 USC § 7661a(b).

324 Gaines, *supra* note 23, at 474-75, quoted in Nanda, *supra* note 251, at 322.

325 PPP and Trade, *supra* note 48, at 14.

326 Magnus, *supra* note 245, at 17.

327 Act on Environmental Load Charges, Act LXXXIX of 2003, and Act on the General Rules of Environmental Protection, Act LIII of 1995, described in Csak, *supra* note 256, at 14-20.

328 Act No. 233/2001 Coll. on Wastes; Act No. 544/1990, on Local Fees, as amended; both cited in Stefanovic, *supra* note 249, at 2.

329 Germanò, *supra* note 246, at 7-8.

330 *Umwelthaftungsgesetz*, 10 Dec. 1990, BGBl. 1990 I 2634, described in Magnus, *supra* note 245, at 6-7. This law has limited application to agriculture, applying to large pig and poultry farms.

the rights of others, but also requires payment of costs to restore nature or landscape.[331] The Waterhousehold Act[332] protect bodies of water and imposes strict liability when a person suffers damage from emissions and other harmful actions. Damages include economic loss and reflect the market value of the interest damaged by the pollution. Activities operated properly under a licensed right (a permit) are protected from liability to some extent. Other German laws, too, including the Federal Emissions Protection Act, impose strict liability for environmental damage.[333] Private actions to protect the environment are rare; only a few cases have been decided.[334] Using another approach, the Federal Nature Protection Act prescribes that the polluter is to avoid impairment of nature or, if necessary, to restore the damaged area. Only as a last resort is financial compensation allowed.[335]

Similarly, Italy imposes civil liability in two important measures. Law no. 349 (8 July 1986), with a focus on compensation, requires repayment to the State by anyone who, negligently or deliberately, "compromised the environment, damaging, altering it, causing deterioration or destroying it wholly or partially."[336] The judge who calculates the cost must take into account the seriousness of blame, the cost of restoration, and the profits earned by the polluter's harmful behavior.[337] In addition, legislative decree no. 22 (5 Feb. 1997, the *Ronchi* decree), which focuses on reclamation, assigns financial responsibility for environmental contamination (even accidental contamination) to the polluter at his or her own expense.[338] Other laws also assign responsibility for pollution – e.g., a decree dealing with water conservation, which focuses on reclamation, but indicates that when pollution cannot be eliminated, compensation must be paid.[339]

The Environmental Protection Act in Finland includes a liability rule that requires the polluter to pay for restoration of soil or groundwater to a condition that will not harm health or the environment.[340] In addition, the Act on Compensation for Environmental Damages (ACED),[341] effective in 1995, imposes strict liability for damage and related costs caused by environmental pollution, whether lawful, illegal, or accidental. Though the law is not

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331 Restoration can be required "even if the costs exceed the value of the damaged property considerably." Magnus, at 6.

332 *Wasserhaushaltsgesetz*, 12 Nov. 1996, BGBl, 1996 I 1695, described in Magnus, at 7-9.

333 Magnus, at 10.

334 Magnus, at 14-15.

335 *Bundesnaturschutzgesetz*, 25 Mar. 2002, art. 19, BGBl. 2002 I 1193, described in Magnus, at 4, 12-13. The *Länder* may permit payment. Private environmental organizations may have standing under some provisions of the law. Magnus, at 15.

336 Law no. 349, 8 July 1986, § 18, para. 1, quoted in Germanò, *supra* note 246, p. 1.

337 *Id*., § 18, para. 6.

338 Legislative decree no. 22, 5 Feb. 1997 (the *Ronchi* decree), § 17, cited in Germanò, *supra* note 246, p. 2.

339 Legislative decree no. 152, 11 May 1999, cited in Germanò, at 2.

340 EPA, 86/2000, described in Nordberg, *supra* note 264, at 150.

341 Act 737/1994, described in Nordberg, at 145, 165. This law implements the Lugano Convention, discussed *supra* text accompanying notes 164-70.

retroactive, liability is extensive.[342] Operators and owners of land, their successors (under some circumstances), landlords, and others may face liability. Under ACED, however, some nuisances must be tolerated. Its strict liability provision requires compensation for damage only if toleration of a nuisance would be unreasonable, under the circumstances. This provision and the rather vague definition of pollution discharges into surface waters have insulated farmers from civil liability under ACED.[343]

The Greek Law on the Protection of the Environment applies the PPP to require cost internalization of possible environmental damage. It states that "any natural or legal person which causes pollution or other degradation of the environment is liable for compensation," absent *force majeure* or intentional act by a third person.[344] Strict liability applies if the plaintiff proves causation and damages. Spanish law, too, requires those who cause damage to the environment to bear the cost of restoration. Provisions of the state law on conservation of natural areas and the law protecting forests, which require restoration of damaged ecosystems and forest, are examples.[345]

Rules for Environmental Protection in the Slovak Republic make polluters (e.g., producers of waste) responsible to compensate related losses, but the principle is not fully applied.[346] In Hungary, a draft of a new Civil Code would impose civil liability for endangerment and damage to the environment.[347]

7.3.3. Civil and Common Law Claims of Victims

The PPP is also implemented through judicial procedures in which plaintiffs sue to recover damages for harm to person or property caused by pollution. These may include claims authorized by statute or, in common law countries, common law tort claims. Some of the measures discussed above in connection with civil liability apply to individual victims of pollution; they are not repeated here.

In Germany, for example, tort law provides a cause of action to redress environmental damage caused negligently and illegally. The claimant must prove both causation and fault; full compensation is available.[348] In addition, the General Law for Neighbors allows a claim

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342 The Environmental Insurance Act, 81/1998, supplements the liability system. Operations with environmental permits must have insurance. Nordberg, at 170.

343 Nordberg, at 165-66. Under earlier legislation, the Tort Liability Act, 412/1974, farmers enjoyed no privileged position, but that law required negligence. *Id*. at 166.

344 Law 1650/1986, art. 29, quoted and discussed in Raftopoulos, *supra* note 244, at 200-02.

345 Law 4/1989, 27 Mar. 1989, as amended; Law 43/2003, 21 Nov. 2003; both described in Llombart & Amat, *supra* note 248, at 6, 8.

346 Act No. 17/1992, as amended, cited in Stefanovic, *supra* note 249, at 1.

347 Csak, *supra* note 256, at 9.

348 *Bürgerliches Gesetzbuch* (BGB) § 823, para. 1, described in Magnus, *supra* note 245, at 10.

for compensation if emissions impair the use of land. Application of this provision depends on location, however, because noises or smells (e.g., from livestock) that are actionable in cities must be tolerated in agricultural areas.[349]

Greek law, too, applies the PPP, albeit indirectly, through remedies for "damage caused by pollution to private interests" (rather than to the environment itself).[350] Several provisions in the Greek Civil Code, including those related to the right to "personality," neighborhood law, and tort liability, govern. Under the Civil Code, fault-based liability for unlawful damage raises problems of proof (e.g., causation and fault), but violation of an environmental statute or regulation may establish liability. Nuisance-like principles in the neighborhood law allow injunctions or damages for significant harm to the use of neighboring land.[351]

Private law in Spain applies to environmental damage, including harm caused by agricultural activities. Principles of civil responsibility and the law of damage establish the polluter's duty to reimburse the victim of environmental harm, perhaps even in cases where the polluter has followed ordinary rules of practice. The PPP principle applies to those who damage the environment: "anyone who carries out an activity that is pernicious for the environment will be obliged to repair the damage caused and pay the corresponding compensation."[352]

In Slovakia, too, the Civil Code requires a landowner to avoid interfering with the rights of others and to compensate for loss caused by damage to others.[353] The Act on Air Protection applies special rules to agricultural activities. Air pollution is subject to maximum emission levels, but under Slovak law cannot be prohibited entirely, and a farmer may buy an air pollution quota from a neighbor.[354]

In the US and Canada, victims of pollution use common law tort theories, including nuisance, negligence and trespass, to claim damages. Pollution from agriculture, like other types of pollution, can be the focus of such litigation.[355] Right to farm laws, effective in many US states, protect farming operations from nuisance suits, usually when the farm existed before the change in land use that led to the nuisance claim. Some US right to farm laws protect only farms that follow good agricultural practices or comply with environmental requirements.[356]

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349 BGB §906, para. 2, sent. 2, described in Magnus, at 10.
350 Raftopoulos, *supra* note 244, at 205.
351 *Id*. at 205-10.
352 Llombart & Amat, *supra* note 248, at 27-28.
353 Civil Code §125, described in Stefanovic, *supra* note 249, at 5.
354 No. 478/2002 Coll., described in Stefanovic, at 5.
355 Nanda, *supra* note 251, at 336; Bowden, *supra* note 243, at 72-73.
356 Nanda, at 336-38.

Canadian right to farm laws, enacted in every province, exempt farming operations from nuisance suits when the farm follows normal farming practices. In effect, these statutes, which seem to apply more broadly than those in the US, tend to protect agri-businesses from rural neighbors and thereby prevent application of the PPP.[357]

7.4. Application of the PPP to Agriculture

7.4.1. Agriculture and General Environmental Laws

National Reporters agree that general environmental laws apply, at least in theory, to agriculture.[358] Both public regulatory laws and civil liability statutes usually apply to harm from agricultural activities. Several factors, however, weaken their application. Significantly, agriculture often enjoys exemptions from some provisions of general environmental laws; a few examples have been mentioned above. In addition, the diffuse nature of pollution from agriculture and the difficulty of identifying the polluter hamper enforcement of environmental laws and allocation of responsibility for damages. Some examples from National Reports illustrate.

7.4.1.1. Europe

In Germany, for example, the Waterhousehold Act, mentioned above, applies to activities, including agriculture, that damage surface and ground waters. But the farmer's use of normal and reasonable quantities of fertilizers or pesticides is not considered a polluting activity under the Act; excessive application, if proved, would trigger liability. Strict liability applies for damage caused by emission of untreated sewage (manure) into water. Though the law applies to agricultural activities, problems of proving causation have discouraged enforcement against farmers.[359]

In Italy, too, environmental laws apply broadly, but some include special provisions for agriculture. The legislative decree that regulates waste, for example, governs agriculture like other industries, but exempts small farmers from some record keeping obligations.[360] Water protection laws treat water emissions from defined agricultural activities as domestic waste water, which is regulated by weaker obligations than those for industrial waste water. Farmers who violate the law are punished only by administrative sanctions, instead of the penal sentences faced by industry.[361]

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357 Bowden, *supra* note 243, at 76-78. For an exception in Ontario, see *id*. at 78.

358 E.g., Csak, *supra* note 256, at 11.

359 *Wasserhaushaltsgesetz*, 12 Nov. 1996, BGBl, 1996 I 1695, described in Magnus, *supra* note 245, at 7-9.

360 Legislative decree no. 22, 5 Feb. 1997 (the *Ronchi* decree) and legislative decree no. 389, 8 Nov. 1997 (*Ronchi-bis*), described in Germanò, *supra* note 246, at 7-8.

361 Legislative decree no. 152, 11 May 1999, described in Germanò, at 8-9.

Finnish environmental laws also apply broadly, but under some laws, agricultural operations face special requirements. For example, permit requirements under the Environmental Protection Act, discussed above, apply to livestock facilities with specific numbers of animals, e.g., at least 30 dairy cows, 60 full-grown sows, 30,000 laying hens. Large facilities (e.g., over 900 sows) require an environmental impact assessment before a permit can be granted.[362]

The Slovak Act on Environment, applies basic legal rules to agriculture, as well as other fields. Any person who pollutes or damages the environment bears responsibility for the harm.[363] Under the Act on Wastes, the definition of "wastes" is broad enough to include agricultural wastes.[364] When damage occurs in connection with plant production, the land owner is normally responsible; on leased land, the tenant bears responsibility.[365]

7.4.1.2. North America

In the US, like other nations, the impact of farming on the environment concerns policymakers. As the USDA noted, "Americans consider environmental quality as a kind of 'non-market' good that is extremely important in consumer choices. The close interactions between farming practices and natural resources, always important, have been in the spotlight since the 1960s."[366]

Though US laws apply broadly, some polluting agricultural activities are exempt from a number of environmental laws that apply to other industries. These exemptions can be explained, in part by the diversity of agriculture, as well as by geographic, economic, and political reasons.[367] For example, though CERCLA applies to most industries, important exceptions protect farmers. CERCLA excludes liability for damages from application of a pesticide product registered under federal law;[368] in addition, it excludes the "normal application of fertilizer" from the definition of releases subject to remediation and liability.[369] Numerous other laws, including the Clean Water Act and the Clean Air Act, have specific provisions or exemptions for agriculture.[370]

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362 Nordberg, *supra* note 264, at 148.
363 Act No. 17/1992 Coll., § 8, described in Stefanovic, *supra* note 249, at 2-3.
364 Act No. 233/2001 Coll., § 2 & Annex 16, described in Stefanovic, at 1, 3.
365 Act on Lease of Agricultural Land, No. 504/2003 Coll., described in Stefanovic, at 3.
366 USDA, Food and Agricultural Policy: Taking Stock for the New Century 2 (2001)
367 Nanda, *supra* note 251, at 329.
368 42 USC §9607(i). Pesticides are regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, 7 USC § 136-136y.
369 42 USC §9601(22). *See* J. B. Ruhl, *Farms, Their Environmental Harms and Environmental Law*, 27 Ecology L.Q. 263, 315 (2000). Ruhl's article discusses numerous exceptions for agriculture in US environmental laws.
370 Nanda, *supra* note 251, at 329-36; Grossman, *Polluter Pays*, *supra* note 295, at 39-46.

In Canada, environmental legislation often includes PPP provisions of broad scope, which apply, at least in theory, to pollution from agricultural operations (e.g., pesticide drift, fertilizer runoff, odors). But special rules apply to agriculture. For example, farmers are exempt from laws that govern most aspects of pesticide use, even those requiring education and training.[371] Few instances of enforcement of environmental statutes against farmers have been documented. Lack of enforcement can be explained in part by the fact that environmental legislation may be subordinate to other laws specific to agriculture and by provisions, like the pesticide exception, that make some agricultural activities exempt from environmental laws.[372]

7.4.2. Special Rules for Agriculture

Some environmental laws are directed specifically at agriculture. A few examples, which to some extent implement the PPP, illustrate. In addition, National Reporters described a number of measures that focus on livestock facilities, both in the EU and in North America. Measures to protect agricultural resources, often connected with laws that govern agricultural production, are discussed below.

In the EC, a few environmental and other Directives apply specifically or mainly to agriculture – e.g., the Nitrates Directive and pesticide measures. Member States implement these Directives, often in laws that focus on agriculture and the environment.

In Germany, for example, the Plants Protection Act and the Fertilizer Regulation implement EC Directives.[373] Compliance with these laws and accompanying good professional practice relieves farmers from duties under other, general laws. Though these specialized laws provide exemptions from laws applying to other industries, their provisions ensure that farmers meet high standards to avoid polluting the environment.[374]

Hungary has a National Agricultural Environmental Program,[375] designed to harmonize Hungarian laws with EC measures, but also to protect the environment.

A few National Reports note laws that make farmers liable for damage from genetically modified (GM) crops. For example, under the German Genetechnique Act,[376] the operator who plants a genetically modified organism is liable, regardless of fault, for damage (including restoration costs for nature or landscape) that a GM organism causes to another. Under this

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371 Bowden, *supra* note 243, at 66.

372 *Id*. at 63-66. Fish kills caused by pesticide runoff, however, have been subject to recent enforcement.

373 *Pflanzenschutzgesetz*, 14 May 1998, BGBl. 1998 I 971; *Düngemittelverordnung*, 23 Nov. 2003, BGBl. 2003 I 2373, cited in Magnus, *supra* note 245, at 14.

374 Magnus, at 14.

375 Governmental Regulation 2253/1999 (X.7.), cited by Csak, *supra* note 256, at 12.

376 *Gentechnikgesetz*, 16 Dec. 1993, BGBl. 1993 I 2066, described in Magnus, *supra* note 245, at 9. Liability provisions are similar to those in the Environmental Liability Act.

law, the modification of the organism must be the source of its danger and the damage to others. Because few GM crops have been planted in Germany, this law has so far had little impact. Similarly, the Gene Technology Act in Finland imposes strict civil law liability for damage from caused by biotechnology.[377] Italian law, too, makes farmers responsible for damage from GM crops, if they fail to comply with coexistence rules.[378]

Legislators in both the US and Canada have addressed pollution from agriculture through voluntary measures and incentives, as well as by law and regulation. For the US, this preference was reflected in May 2006, when the Environmental Protection Agency published its *National Strategy for Agriculture*. This brief document sets forth a framework to help the agriculture industry address environmental concerns.[379] Working with the USDA, the EPA plans to identify ways for agriculture to achieve greater environmental protection, through "collaboration, innovative and voluntary programs, financial incentives, and traditional regulatory approaches."[380] Similarly, Canadian governments, both federal and provincial, prefer to work with industry to development voluntary guidelines for practice, instead of enacting and enforcing mandatory legislative measures.[381] Moreover, despite Canada's federal commitment to the PPP, neither federal agricultural policy nor agricultural legislation refers explicitly to the principle.[382]

7.4.2.1. Livestock

In a number of countries, the environmental impacts of livestock are the focus of regulation that applies the PPP.

In the EC, the Nitrates Directive[383] was the first agricultural measure to be enacted under the EC's environmental competence and the first to address water pollution from agriculture directly.[384] It is intended to reduce water pollution caused by nitrates from agricultural sources and to prevent further nitrate pollution. Among other provisions, the Directive requires Member States to identify and designate nitrate vulnerable zones (NVZs, land areas that drain into impaired or threatened waters), prepare and implement Action Programs for NVZs, and establish a code of good agricultural practice, to be mandatory in NVZs and voluntary in other areas.[385] The Directive, which requires Member States to impose limits on farmers'

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377 GTA, 337/1995, as amended, cited by Nordberg, *supra* note 264, at 149.

378 Germanò, *supra* note 246, at 15-16. A national fund and insurance may be available to pay for damage not caused by the farmer's fault. But *see infra* note 460.

379 US EPA, National Strategy for Agriculture (2006).

380 *Id*. at 2.

381 Bowden, *supra* note 243, at 68-69.

382 *Id*. at 68.

383 Council Directive 91/676 concerning the protection of waters against pollution caused by nitrates from agricultural sources, 1991 OJ (L 375) 1.

384 Nordberg, *supra* note 264, at 152.

385 Grossman, *Nitrates from Agriculture*, *supra* note 302, at 587-91 (discussing the Nitrates Directive in detail).

application of manures and chemical fertilizers, applies the PPP, as well as the principles of precaution and prevention. Therefore a number of National Reports mention national legislation that implements the Nitrates Directive.

The Finnish Environmental Protection Act implements the Nitrates Directive, and the accompanying Nitrates Decree includes mandatory measures and recommendations that set out required good agricultural practices.[386] These focus on storage and use of manure, application of nitrogen fertilizers, location of facilities, testing and recordkeeping requirements. For some areas, particularly the Gulf of Finland, these measures may not be stringent enough, and more effective environmental measures, perhaps including incentives (e.g., agri-environmental support) and agronomic limits on use of fertilizers, seem to be necessary.[387]

Italy enacted a Code of Good Agricultural Practice (CBPA)[388] as part of its 1999 implementation of the Nitrates Directive. The CBPA is intended to avoid damage to the environment and even to improve it. Livestock farming is contingent on the availability of land necessary to spread wastes (or the possibility to transfer wastes to other land).[389] Without setting specific emission tolerances, it focuses on application of fertilizers and storage and treatment of livestock waste. The 1999 CBPA is voluntary. Regions, which are competent for agriculture and land management in Italy, may require obligatory measures as part of their action plans for NVZs; these are expected to be based on the CBPA.[390]

Hungary has a Governmental Order designed to implement the Nitrates Directive on its territory.[391] Romania enacted a measure to protect water from nitrates from agricultural sources.[392]

In the US, some livestock facilities are subject to regulation under the Clean Water Act (CWA), which requires permits for point sources of pollution.[393] Certain large feedlots, called concentrated animal feeding operations, are defined as point sources under the CWA[394] and are thus subject to permit requirements, as well as effluent limitations.[395] More stringent

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386 EPA, 86/2000, §11; Nitrates Decree, 931/2000, described in Nordberg, *supra* note 264, at 152-56.

387 Nordberg, at 153.

388 Ministerial decree, 19 Apr. 1999, cited in Germanò, *supra* note 246, at 6, 13-14.

389 Germanò, at 8.

390 Germanò, at 13-14.

391 Governmental Order 49/2001 (IV.3.), cited by Csak, *supra* note 256, at 12.

392 Decision du Gouvernement nr. 964/2000, as amended, cited by Uliescu, *supra* note 293, at 7. Uliescu reports that Romanian law is nearly harmonized with EC law, though implementation remains a difficult task, *id*. at 11. Romania joined the EU 1 January 2007, but faces entry requirements.

393 33 USC §1342. Permits are required under the National Pollutant Discharge Elimination System.

394 33 USC §1362(12), (14).

395 Nanda, *supra* note 251, at 330-33. But the CWA excludes "return flows from irrigated agriculture" and "agricultural stormwater discharges" from its definition of point sources, 33 USC §1362(14). Nonpoint sources of pollution from agriculture are often exempt from regulation. *See* Grossman, *Polluter Pays*, *supra* note 295, at 41.

regulations, promulgated in 2002, increase the number of facilities that must operate under permits,[396] but these requirements still apply to a rather small number of operations. Emissions from other livestock facilities, as well as from animals on pasture, are considered nonpoint pollution, which escapes most regulation under the CWA, though state laws often apply.

US regulation of air pollution from livestock facilities has been hampered by lack of scientific methodology to measure emissions accurately. Only a few large feedlots are now subject to regulation under the Clean Air Act. The EPA, with cooperation of the agricultural industry, is developing methodology to measure emissions. Under a special "consent agreement," participating livestock facilities have entered an agreement with EPA. In exchange for payment of a civil penalty and making their facilities available for monitoring, operators are exempt from EPA enforcement until conclusion of the study. Regulations will be promulgated in light of emissions methodology recommended in the study.[397]

Provinces govern intensive livestock operations in Canada. The province of Ontario, for example, exempts farmers from some provisions of the Environmental Protection Act when animal waste is applied "in accordance with normal farming practices."[398] A special Nutrient Management Act, however, governs the disposal of manure and other agricultural wastes to protect the environment. The law requires review of nutrient management plans and authorizes remediation of environmental damage and recovery of costs from the polluter.[399] Other provinces, too, regulate intensive livestock operations, though provisions vary.[400]

7.4.2.2. Influence of property rights

A few National Reports indicate that private ownership of farmland may be a factor in government reluctance to apply the PPP strictly. In Canada, for example, where most farmland is privately owned, legislators seem to be "reluctant to infringe on rural property interests," despite the lack of "explicit constitutional protection of property rights."[401] Farmers, in turn, fear loss of control of their property. As a result, many environmental problems connected with agriculture have been addressed by voluntary measures, rather than regulatory standards.[402]

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396 *See* 40 CFR parts 122 (permits) & 412 (effluent limitations). A 2005 court decision required amendment of some provisions of the regulations; proposed amendments were published at 71 Fed. Reg. 37,444 (30 June 2006).

397 Nanda, *supra* note 251, at 333-34; Grossman, *Polluter Pays*, *supra* note 295, at 44-46. Large grain elevators and manufacturers of fertilizers and pesticides are regulated under the CAA. Nanda, at 333.

398 Environmental Protection Act, R.S.O., ch. E.19 (1990) (Ont.), as amended, cited by Bowden, *supra* note 243, at 71.

399 Nutrient Management Act, R.S.O., ch. 4 (2002) (Ont.), cited by Bowden, at 71-72.

400 Bowden, at 74-76.

401 *Id*. at 69.

402 *Id*. at 69-70.

Nonetheless, though property rights have some impact on environmental law, they do not provide justification for causing damage to others, nor is property ownership an excuse for causing pollution, even on one's own property.[403] Thus, pollution law in Finland "does not recognise property rights nor does it foresee compensation for rejected permit applications."[404] But private ownership does influence liability for pollution in some circumstances. That is, natural resources in Finland, including watercourses, are privately owned, and farmers sometimes own water bodies connected to their land. Pollution from farm fields that causes eutrophication of those privately-owned small lakes may not result in civil liability. Public law measures (e.g., prohibitions or standards), however, do apply.[405]

Property rights may indicate that compensation should be paid when environmental regulation restricts the use of private property, either land or personal property. In Finland, for example, when environmental law protects resources in a specified area (e.g., a nature preserve), resulting interferences with private property must be compensated.[406] In Slovakia, farming may be limited in areas with protected water resources. The Act on Waters authorizes compensation for property loss when agricultural activities are restricted.[407] Similar protection of rights in personal property may be available. In Canada, farmers who have used pesticides legally, but whose produce cannot be sold because of pesticide residues, are eligible for government compensation under the Pesticide Residue Compensation Act, under certain conditions.[408]

7.5. The PPP and Government Support for Agriculture

Government support for agriculture also raises questions connected with the Polluter Pays Principle. The principle should apply when agricultural activities impose environmental harm that affects private and public property. But when producers are asked to modify their practices to provide environmental benefits (rather than to avoid harm), subsidies can be justified. Subsidies are significant because, as the OECD noted in 2001, "[d]efining who pays and who is paid for the desired level of environmental performance has important implications for the distribution of income and wealth."[409]

In this context, it is important to distinguish between two different types of environmental requirements. In one, the cross-compliance approach, payments to farmers are contingent

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403 Nordberg, *supra* note 264, at 135.
404 *Id*. at 136.
405 *Id*. at 166-67.
406 *Id*. at 135-36. Compensation is required for expropriation as well.
407 No. 184/2002 Coll., described in Stefanovic, *supra* note 249, at 4.
408 R.S.C., ch. P-10 (1985), cited by Bowden, *supra* note 243, at 70. Bowden finds that the legislation incorporates the PPP "in a somewhat backhanded fashion." *Id*. at 71.
409 OECD, Environmental Performance, *supra* note 11, at 6.

on compliance with minimum environmental standards of farming, sometimes called good agricultural practices. In the other, the provider gets approach, farmers receive payments for practices that go beyond minimum requirements (analogous to the reference level defined by the OECD in 2001)[410] to protect the environment.

7.5.1. Cross Compliance and Good Agricultural Practice

7.5.1.1. Europe

EC measures protect the environment by requiring farmers who receive direct payments to meet environmental requirements set out in Regulations that are part of the Common Agricultural Policy (CAP). Early structural Regulations allowed Member States to attach environmental conditions to some payments, and legislation enacted after 1992 required producers who received certain support payments to comply with so-called cross-compliance measures.[411] For example, environmental protection was an early objective of mandatory set aside of cereal land, and Member States were directed to require appropriate environmental measures for set-aside land.[412] The Agenda 2000 reform of the CAP imposed mandatory cross-compliance measures as a condition for direct payments.[413]

The CAP now requires farmers who receive the single farm payment and other direct payments to comply with a number of pre-existing statutory measures and to follow good agricultural practices. The 2003 Horizontal Regulation, which establishes common rules for direct CAP support to producers, conditions receipt of direct payments on compliance with statutory management requirements,[414] that is, practices imposed by eighteen legislative measures that govern the environment, public and animal health, and animal welfare. Measures to protect the environment, which applied from 1 January 2005, include the Nitrates Directive, the Wild Birds and Habitats Directives, and Directives concerning of protection of groundwater and the application of sewage sludge in agriculture.[415] In addition, in a new requirement, Member States have the obligation to ensure that "all agricultural land … is maintained in good agricultural and environmental condition." States must establish minimum requirements, either regionally or nationally, based on a framework established in the Regulation and taking into account "soil and climatic condition, existing farming systems,

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410 *Id*. at 9. *See supra* text accompanying notes 223-26.

411 For information about the history of cross-compliance and its implementation in the United Kingdom, *see* Cardwell, *supra* note 109.

412 Council Regulation 1765/92, 1992 OJ (L 181) 12. These early cross-compliance requirements, however, had little effect. *See* Cardwell, *supra* note 109, at 103-04.

413 *E.g.*, Council Regulation 1259/1999, 1999 OJ (L 160) 113, cited by Cardwell, *supra* note 109, at 104.

414 Council Regulation 1782/2003, art. 3, 2003 OJ (L 270) 1, 8.

415 *Id*. art. 4 & Annex III, 2003 OJ (L 270) at 8, 56.

land use, crop rotation, farming practices, and farm structures."[416] Member States must ensure that farmers comply with these obligations; penalties, including reduction of or exclusion from direct payments, may be assessed for noncompliance.[417]

Member States determine the standards of good agricultural practice that will keep land in good agricultural and environmental condition. For example, in Italy, a Ministerial Decree from 13 December 2004 establishes requirements for maintaining land in good agricultural and environmental condition, with different measures for arable land, olive groves, and permanent pasture.[418] In addition, the 1999 Code of Good Agricultural Practices (CBPA) enacted in connection with the Nitrates Directive, albeit voluntary, focuses on avoiding damage to the environment.[419]

In Spain, too, required practices for receipt of direct aid are set out in a number of laws that protect natural resources. As prescribed under the CAP, these include measures to protect natural spaces, flora and fauna, biodiversity, water control, sewage sludge, and nitrates.[420] In addition, a Royal Decree provides a catalog of "good conditions" designed to meet the EC requirement that land be kept in good agricultural and environmental condition.[421] Farmers themselves must meet the cost of these basic requirements. Autonomous Communities have also established minimum requirements for good agricultural practice in their own territories.

Detailed prescriptions for good farming practice in Hungary are designed to meet EC requirements for direct support schemes.[422] In addition, soil conservation requirements might be included among the requirements for good agricultural practice. These include professional cultivation practices and soil protection measures designed to prevent wind and water erosion and other degradation.[423]

Some good practice requirements seem to be independent of EC requirements for direct payments. A number of important environmental protection laws in Germany (e.g., for soil protection and nature protection) require farmers to follow good professional practice (*gute fachliche Praxis in der Landwirtschaft*), as specified in regulations. These measures provide

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416 *Id*. art. 3 and Annex IV, 2003 OJ (L 270) at 8, 58.

417 *Id*. arts. 6-7, 25, 2003 OJ (L 270) at 8-9, 12. Cardwell, who doubts that cross compliance is a "straightforward application" of the PPP, notes that a farmer who does not accept payments would be free of cross compliance obligations, but concludes that the importance of single farm payments makes this choice unlikely. Cardwell, *supra* note 109, at 109-10. Moreover, the statutory management requirements include their own penalties for non-compliance, which would still apply.

418 Germanò, *supra* note 246, at 14. The decree is "in default of directions set out by Regions," which have authority over agriculture and land management.

419 Germanò, at 13-14, discussed *supra*, text accompanying notes 388-390.

420 Llombart & Amat, *supra* note 248, at 23-24.

421 Royal Decree 2352/2004, described in Llombart & Amat, at 23.

422 Csak, *supra* note 256, at 34-39.

423 *Id.* at 29-32.

minimum protection for the environment and are mandatory. Following the good practice requirements (characterized as "rather vague commandments") constitutes compliance with specified environmental laws, but failure carries negative consequences.[424]

In Romania, the Code of Good Agricultural Practices is intended to prevent pollution of water and soil and to promote sustainable agriculture. It governs use of fertilizers, both chemical and organic. The Code could help to internalize the cost of pollution, as required by the PPP. But the Code is not mandatory, and failure to comply has no consequences for the producer.[425]

7.5.1.2. North America

In the US, cross compliance imposed by agriculture legislation requires farmers who receive federal farm support to implement measures to conserve highly erodible land (conservation compliance) and to protect wetlands.[426] Conservation compliance, which requires the farmer to follow a conservation plan and use approved conservation systems on highly erodible land, is intended in part to reduce pollution caused by erosion. Restrictions on farming converted wetlands or converting wetlands for crop production are intended to preserve wetlands. Both programs, however, are considered voluntary, because farmers are not required to accept farm program payments.[427]

In Canada, the development of environmental farm plans, discussed below, will encourage implementation of best management practices.[428]

7.5.2. Environmental Subsidies and the Provider Gets Principle

7.5.2.1. Europe

The EC authorizes payments to producers who adopt environmentally friendly farming practices that go beyond the requirements of the cross compliance provisions discussed above. Agri-environmental measures, rooted in structural legislation enacted in the 1970s and 1980s, became a more prominent part of the CAP in 1992, with enactment of the so-called

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424 Magnus, *supra* note 245, at 12, 16. Organic farming, which has increased in recent years, is less harmful to the environment than traditional farming, even with good agricultural practices.

425 Uliescu, *supra* note 293, at 7-9.

426 16 USC §§3811-3814, 3821-3824. *See* Grossman, *Polluter Pays*, *supra* note 295, at 46-48.

427 Other US measures, of course, protect wetlands, *e.g.*, 33 USC §1344(a), which requires permits for "discharge of dredged or fill material" into navigable waters, including certain wetlands.

428 Bowden, *supra* note 243, at 80-84. *See infra* text accompanying note 448.

"accompanying measures," which included an important environmental component.[429] Agri-environmental support is now an important component of Rural Development, the so-called Second Pillar of the CAP.[430]

Agri-environmental support is governed by the Rural Development Regulation, which includes numerous other programs for agricultural development in rural areas.[431] This regulation, which applies through 2006, authorizes payments under contracts of five years or longer for practices that protect the environment or maintain the countryside. Member States must enact programs for agri-environmental support, but producer participation is voluntary.

Under the regulation, "[a]gri-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."[432] Payments should be calculated on the basis of income foregone, additional costs, and the need to provide an incentive, with maximum amounts per year governed by regulation.[433] Support is also authorized to help farmers meet demanding new EC standards for environment that impose new obligations or restrictions on farming practices.[434] Beginning in 2007, Council Regulation 1698/2005 will replace the Rural Development Regulation; its language indicates clearly that eligible agri-environmental commitments must go beyond good farming practices: "Agri-environment payments cover only those commitments going beyond the relevant mandatory standards established [in Regulation 1782/2003, discussed above] as well as minimum requirements for fertiliser and plant protection product use and other relevant mandatory requirements established by national legislation."[435]

The Rural Development Regulation also authorizes compensation in less-favored areas and areas with environmental restrictions.[436] Though compensation would normally go only to farmers whose environmental practices are more restrictive than minimum standards of good practice, producers in mountain and other less-favored areas receive compensation for normal farming, to ensure that agriculture is maintained in areas where its abandonment would result

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429 *See generally* Grossman, *Agro-environmental Measures*, *supra* note 55.

430 The First Pillar is the common organization of the market and includes the single farm payments mentioned above. *See* Cardwell, *supra* note 109, at 101, 104.

431 Council Regulation 1257/1999, 1999 OJ (L 160) 80, as amended by Council Regulation 1783/2003, 2003 OJ (L 270) 70. *See also* the Community Guidelines for State Aid in the Agriculture Sector, *supra* text accompanying notes 105-18.

432 *Id*. art. 23, as amended by Council Regulation 1783/2003, 2003 OJ (L 270) at 73. The Regulation also authorizes support for animal welfare commitments.

433 *Id*. art. 24 & Annex, as amended by Council Regulation 1783/2003, 2003 OJ (L 270) at 74, 77.

434 *Id*. arts. 21a-21d, added by Council Regulation 1783/2003, art. 1(9), 2003 OJ (L 270) at 72-73 (including support for other purposes). These provisions are framed in a way that does not breach the PPP, according to Nordberg, *supra* note 263, at 165.

435 Council Regulation 1698/2005, art. 39, 2005 OJ (L 277) 1, 20. *See* Cardwell, *supra* note 109, at 107.

436 Council Regulation 1257/1999, arts. 13-16, 1999 OJ (L 160) at 88. Provisions effective in 2007 are at Council Regulation 1698/2005, arts 37-38, 2005 OJ (L 277) at 19-20.

in environmental degradation.[437] Moreover, farmers may be compensated for restrictions due to implementation of the Wild Birds and Habitats Directives.[438] But a provision that seems to implement the PPP indicates that support in areas with environmental restrictions cannot "offset the costs and loss of income resulting from the implementation of restrictions based on" the Nitrates Directive.[439]

In Finland, the program for environmental support implements the EC requirement that support compensate only losses of income and cost increases that result from production methods beyond the minimum standards of good practice – that is, income losses and costs that do not violate the PPP. Finland's implementation of agri-environmental support focuses on water protection; required practices include environmental planning and monitoring, restricted fertilizer use, targeted application of pesticides, establishment of headlands and filter strips, and biodiversity and landscape management. Livestock farms must follow measures to manage manure. In addition, each farmer who receives support must carry out an additional environmental measure (e.g., cover crops during winter, reduced ammonia emissions from manure storage). These measures are expected to reduce agricultural contributions to erosion, pesticides, phosphorus, and nitrogen in water bodies.[440]

As directed by the Rural Development Regulation, Spanish law requires a "superior environmental standard" – specific environmental improvements outlined in legislation – for compensation under agri-environmental contracts. These measures go beyond the minimum good agricultural practices required for direct payments.[441] In less favored areas, funds are insufficient to satisfy all requests for aid, so farmers who meet higher environmental standards will get priority over those who fulfill only minimum standards.[442]

Voluntary agri-environmental measures in the EC are intended to add value, over the mandatory cross compliance measures and good farming practices. Thus, payment to producers under these schemes would seem to represent an application of the provider gets principle. The Greek reporter notes this directly; in the case of environmental subsidies, "the PPP is applied in its relational and constructive aspect as a 'Provider Gets Principle.'"[443]

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437 Germanò, *supra* note 246, at 14. See Council Regulation 1257/1999, arts. 13-16, *supra* note 434.

438 *Id*., art. 16, amended by Council Regulation 1783/2003, 2003 OJ (L 270) at 72.

439 Council Regulation 1750/1999, art. 11a, added by Commission Regulation 1763/2001, art. 1(2), 2001 OJ (L 239) 10, 11.

440 Nordberg, *supra* note 264, at 160-64.

441 The practices that constitute a superior environmental standard are listed in Royal Decree 4/2001, described in Llombart & Amat, *supra* note 248, at 26.

442 Llombart & Amat, at 26.

443 Raftopoulos, *supra* note 244, at 268-69 (italics omitted, discussed in the context of subsidies connected to organic agriculture).

A recent evaluation of rural development measures found mixed evidence of added value, as well as evidence that targeted measures to combat soil erosion and water pollution are effective in a number of areas.[444]

7.5.2.2. North America

In the US, farmers who provide environmental benefits under voluntary conservation programs receive payments. US law authorizes programs that compensate farmers both for land retirement and for implementing environmental practices on working land. The Conservation Reserve Program, designed to conserve and improve soil and water, provides rental payments under 10 to 15 year contracts in exchange for land retirement. Between 1986 and 2004, about 34 million acres (13.8 million hectares) of environmentally sensitive cropland have been retired.[445] A Wetlands Reserve Program protects wetlands through permanent and 30-year easements.[446]

Recent emphasis on the conservation of working land is reflected in the Conservation Security Program (CSP), which authorizes incentive payments under contracts that require implementation or maintenance of land management practices carried out under conservation plans.[447] Though the program was intended to apply broadly, budget cuts have limited participation to designated watersheds; over 19,000 contracts cover 14.6 million acres (5.9 million hectares). The Environmental Quality Incentives Program helps producers implement practices to comply with regulatory requirements for soil, water, and air quality. A majority of funding is designated for livestock producers. Numerous other voluntary conservations programs in the US provide incentives for conservation. Though the CSP applies the provider gets principle, EQIP, which authorizes payments to meet environmental regulatory requirements, would seem to violate the PPP.[448]

In Canada, the Agricultural Policy Framework, intended to strengthen the agricultural sector, includes an environmental component. Agri-environmental scans will help to identify environmental problems, and environmental farm plans will encourage adoption of environmentally beneficial practices, including nutrient and pest management. The federal government has made money available to help producers develop and implement environmental farm plans. These plans, which incorporate a provider gets aspect, also help to

444 Agra CEAS Consulting (for European Commission), Synthesis of Rural Development Mid-Term Evaluations Lot 1: EAGGF Guarantee 151-154 (2005), http://ec.europa.eu/agriculture/eval/reports/rdmidterm/lot1/fulltext.pdf.

445 Nanda, *supra* note 251, at 325-26.

446 *Id*. at 326.

447 *Id*. at 327-28.

448 *See* Grossman, *Polluter Pays*, *supra* note 295, at 48-50.

apply the preventive aspect of the PPP.[449] A survey released in May 2006 indicated that most Canadian crop farmers use at least one best management practice to protect the environment, though few have actually received financial incentives.[450]

In an interesting reversal of the provider gets principle, some producer organizations in Canada have asked for compensation that might be termed "a non-polluter is paid." That is, they ask for payment for measures that are merely good farming practices. Though these practices protect the environment, failure to follow them would result in environmental damage, for which the PPP should apply. Thus, producer organizations ask for compensation for ordinary good stewardship, arguing that use of these measures should be voluntary and encouraged by financial incentives.[451]

7.6. Future Developments

National Reporters indicate that the PPP may be applied more strictly to agriculture in the future. Two areas in particular seem to invite stricter regulation or increased liability: water pollution and damage from production of GM crops. In the EU, implementation of the Environmental Liability Directive in 2007 may have implications for agriculture as well.

Water emissions from agriculture are a special concern. The EC Water Framework Directive,[452] based on environmental principles articulated in the EC Treaty, emphasizes sustainable use of waters. Its preamble refers to the importance of integrating water protection into EC policy for agriculture and other sectors. It directs Member States to identify river basin districts and analyze water conditions in each district. Member States must then achieve good water status, using measures set out in management plans for each district. The Directive requires compliance with other EC legislation (e.g., Nitrates Directive, pesticide measures); pollution from diffuse sources, including agriculture, must be prevented or controlled. Member State obligations under the Directive will occupy the next few years, because the Directive requires Member States to achieve good water status for surface waters by 2015 at the latest.[453]

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449 Bowden, *supra* note 242, at 80-84. The Alberta Environmental Farm Plan Company, a nonprofit company, announced that 3,643 plans have been reviewed, and that producers have spent over $10 million (Canadian) on best management practices. They have received $4 million in reimbursements from the Canada Alberta Farm Stewardship Program, which provides up to $30,000 per farm. Alberta Envt'l Farm Plan Co., Environmental Farm Plan continues progress in Alberta, http://www.albertaefp.com/newsRel/nr_060616.php (29 June 2006).

450 Crop Nutrients Council, Adoption of Environmentally and Economically Sustainable Beneficial Management Practices (2006), http://www.cropnutrients.ca.

451 Bowden, *supra* note 243, at 78-80. Some of the producer group proposals, for higher levels of environmental benefits, may reflect the provider gets principle.

452 Directive 2000/60, 2000 OJ (L 327) 1, described by Nordberg, *supra* note 251, at 170-75.

453 Directive 2000/60, arts. 4, 25, 2000 OJ (L 327) at 9, 21.

In the US, too, the effects of agriculture on water quality are the focus of regulatory attention, and the Clean Water Act is expected to apply more stringently to agriculture. Amended rules for large livestock facilities will ensure that more livestock operations are required to obtain permits. Diffuse emissions, including emissions from agriculture, should be addressed by states, as they develop measures to implement the total maximum daily load provision of the CWA, intended to reduce pollutants in impaired waterways.[454]

In the EU, implementation of the Environmental Liability Directive may focus application of the PPP in some segments of agriculture. This Directive governs environmental damage, defined narrowly, and must be implemented by April 2007. It applies to environmental damage from agriculture, albeit only to a limited number of "dangerous" activities (e.g., large pig and poultry facilities, deliberate release of GMOs). For those activities, however, Member States must require operators to bear the costs of both preventive action and remediation, though with some flexibility. Only two States have enacted implementing laws, so the impact of this Directive cannot yet be evaluated.[455]

National Reports suggest that the application of the PPP to genetically modified crops will be an important issue for agricultural producers in the near future. The coexistence of GM, traditional, and organic crops poses difficult technical problems, especially in light of strict traceability and labeling requirements in the EU and other nations.[456] The EU Economic and Social Committee recommended that rules for coexistence, to be enacted by Member States, be driven in part by the PPP. The extra costs of coexistence should be "shared out and compensated for according to the polluter pays principle," and those who supply and use GM crops should bear the cost.[457] As producers in EU countries begin to plant GM crops, issues of liability are expected to arise, especially for damage from commingling GM and other crops. Though the Environmental Liability Directive, mentioned above, applies to environmental damage from GMOs, it does not redress damage to persons and private property.

In Germany, cultivation of GM crops may lead to enforcement of the strict liability provisions of the Genetechnique Act.[458] In Italy, the "need to safeguard traditional agricultural products … against genetically modified crops is strongly felt."[459] Though Italian law[460]

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454 33 USC § 1313. *See* Nanda, *supra* note 251, at 332.

455 *See supra*, text accompanying notes 134-149. For a description of the Spanish draft law, *see* Llombart & Amat, *supra* note 248, at 29-30.

456 *See generally*, Margaret Rosso Grossman, *Traceability and Labeling of Genetically Modified Crops, Food, and Feed in the European Union*, 1 J. Food L. & Policy 43-85 (2005).

457 Opinion of the European Economic and Social Committee on the 'Co-existence between genetically modified crops, and conventional and organic crops,' 2005 OJ (C 157) 155, 161, 163.

458 *See supra*, text accompanying note 376.

459 Germanò, *supra* note 246, at 15.

460 Law no. 5, 28 January 2005, cited in Germanò, at 15. The Italian Constitutional Court ruled in March 2006 that the law is unconstitutional. La Corte Costituzionale, Sentenza N. 116, Anno 2006, http://www.cortecostituzionale.it/.

affirmed the farmer's right to choose traditional, organic, or GM crops, the regions, with constitutional authority to govern their own territories, have authority to protect traditional and organic crops, and some regions would prefer to remain GM free. Geographic conditions in Italy make coexistence particularly difficult, and question of civil liability are likely to ensue.[461]

The Greek National Report indicates that current EC and Greek rules on GMOs take a preventative approach to the PPP.[462] Coexistence requires management of the risks of admixture of GM with other crops, as well as binding standards of good agricultural practice. In addition, application of the PPP demands an effective system to assign responsibility for damage caused by a "wandering gene."[463] Hungary, too, has noted the "considerable hazard" posed by genetic technology.[464] The concerns mentioned by these National Reporters suggest that developments connected with liability for damage from GM crops can be expected in Europe.

In North America, too, liability associated with adverse environmental impacts of GM crops is at issue. Because of cross-pollination, certified organic farmers in Saskatchewan, Canada, can no longer guarantee that their canola crops are GM free. They sued developers of GM canola for damages under common law and statutory theories. The case, now on appeal, may determine the availability of common law tort principles (e.g., nuisance) to redress damages from GM crops.[465]

8. Conclusion

As the discussion above has indicated, the PPP, which originated as an economic principle, is now accepted, explicitly or implicitly, as a principle of law in many nations, and environmental measures govern its implementation. 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."[466]

Application of the principle to some emissions from agriculture, however, has been less vigorous than for other activities. Reluctance to apply the principle to agriculture can be explained in part by long-standing attitudes towards agriculture and long-recognized property rights. More important factors, however, are the nature of agricultural production and its diffuse emissions. As the US Reporter noted, "demographic characteristics … and the diffused

461 Germanò, at 15-16.
462 Raftopoulos, *supra* note 244, at 274. He reviews the EC legislation and its Greek implementation in some detail, at 274-82.
463 *Id*. at 282-87.
464 Csak, *supra* note 256, at 39. *See* Act XXVII of 1998 on Genetic Technology, cited *id*.
465 Hoffman *v*. Monsanto, 2005 SKQB 225, discussed by Bowman, *supra* note 243, at 84-87.
466 OECD, PPP Analyses, *supra* note 2, at 9.

nature of emissions, make it impractical to prescribe an effective uniform regulatory system embodying the PPP as the solution."[467] Yet, as early as 1989, the OECD insisted that "[e]fforts should be made to overcome the perceived difficulties associated with applying this principle to the control of agricultural pollution from diffuse sources."[468] Moreover, as the OECD concluded in 2004, "[t]here 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."[469]

Observations from two National Reporters reflect on application of the principle to agriculture in the EU and in North America. The German Reporter noted, in a comment that could apply to other nations as well, that

> it would go too far to say that the Polluter Pays Principle is not or only specifically applied to agriculture. As far as the principle is applicable in environmental law it applies generally in the same way to agricultural activities as to other environmentally relevant activities … . [N]onetheless in certain respects agriculture is privileged. This concerns in particular the pollution of nature and landscape and of the soil. 'Normal' agricultural practice which necessarily affects nature, landscape and the soil is allowed despite its potentially detrimental effect on the environment as long as the activity follows good professional practice … . [T]hese impairments of the environment are by definition no damage to the environment."[470]

The US Reporter summarized the kinds of measures, apart from the PPP, that can address emissions from agriculture:

> While the Polluter Pays Principle is not fully applicable to agriculture … , a combination of voluntary programs, cross-compliance measures, regulations, and in some instances penalties and taxes, endeavors to encourage conservation and address environmental impacts.[471]

The trend, reflected in many National Reports, is to expect agricultural producers to assume responsibility for internalizing the cost of their emissions to the environment.[472] Indeed, if agricultural production continues to intensify, society may demand that emissions from agriculture be controlled and that pollution costs be internalized. Yet even if agriculture were eventually to lose its privileged position in environmental law, it will remain difficult both to control diffuse emissions from agriculture and to allocate responsibility for the remaining emissions.

In light of the nature of agricultural production, National Reports seem to suggest that it may be impossible and even undesirable to apply the PPP fully to agriculture. Indeed, in the words of one National Reporter, the principle "in its broad sense [might well be] a guiding line rather than a strict principle."[473] As another Reporter suggested, perhaps the ideal approach can be found in laws and regulations that pay "particular attention … to the specific nature of agriculture, without [agriculture] being numbered among the 'exceptions'

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467 Nanda, *supra* note 251, at 339.
468 Opportunities for Integration, *supra* note 40, at 7.
469 OECD, Lessons Learned, *supra* note 234, at 7.
470 Magnus, *supra* note 245, at 15. *See supra* note 196.
471 Nanda, *supra* note 251, at 338.
472 *See, e.g.*, Nanda, at 339.
473 Magnus, *supra* note 245, at 2.

to the principle of environmental protection."[474] Law and regulations could then encourage sustainable agricultural practices and address the remaining unavoidable environmental impacts of providing food and fiber for the world.

The May 2006 *National Strategy for Agriculture*, from the US Environmental Protection Agency, sets forth a compelling vision for the agricultural sector:

> An environment where the agricultural sector is a source of environmental solutions and benefits contributing to and recognized for improvement of the Nation's environmental quality; where the Nation's agriculture is sustainable, economically viable and global in nature; and, where non-traditional, innovative and voluntary approaches are given equal opportunities for success with traditional regulatory approaches.[475]

This vision, for the US and for every nation, will require the cooperation and commitment of agricultural producers, legislators, and regulatory agencies.

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474 Germanò, *supra* note 246, at 6.
475 EPA, *supra* note 379, at 2.