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### The Environmental Policy of the European Economic Community to Control Transnational Pollution - Time to Make Critical Choices

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## NOTES AND COMMENTS

### The Environmental Policy of the European Economic Community to Control Transnational Pollution—Time to Make Critical Choices

#### I. INTRODUCTION

Environmental problems of many sorts are prevalent among the member states of the European Economic Community ("EEC").<sup>1</sup> Often these problems are not confined to the borders of a single country, but are transnational in nature. For example, the North Sea has become the drainage basin for large amounts of pollutants which are discharged directly from coastal cities, industries, and ships, and indirectly through rivers, air, and ocean currents.<sup>2</sup> The North Sea pollution particularly affects shallow river estuaries and wetlands along the shores of the United Kingdom, Denmark, the Federal Republic of Germany, and the Netherlands.<sup>3</sup>

Along the Rhine River, chemical companies have discharged toxic pollutants.<sup>4</sup> Recently, a fire near Basle, Switzerland, caused ten

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1. The European Economic Community ("EEC") is actually part of a larger body called the European Community comprised of the EEC, the European Coal and Steel Community, and the European Atomic Energy Community. Today, however, the EEC is often considered a single "Community." This is perhaps true because a single Court of Justice and Parliament were established with the signing of the Treaty of Rome. A Merger Treaty was signed in May 1965 which combined the separate parts of the Community to form one Council of Ministers and one common Commission for all the member states. The theme of unity pervades the concept of the Merger Treaty: "the Member States were '[r]esolved to continue along the road to European unity, [r]esolved to effect the unification of the three Communities, [m]indful of the contribution which the creation of single Community institutions represents for such unification.'" See Dreyfuss, *The European Economic Community, E.E.C.; Common Market*, in 3 MODERN LEGAL SYSTEMS CYCLOPEDIA § 1.3 (A. Redden ed. 1984).

The 12 countries of the European Community are West Germany, France, Britain, Italy, the Netherlands, Belgium, Luxembourg, Denmark, Ireland, Spain, Portugal and Greece. *Id.*

2. von Moltke & Haigh, *Environmental Protection of the North Sea*, 1 EUR. ENV'T REV., June 1987, at 12.

3. *Id.*

4. Searles, *The "Sandoz Incident" and Implications for the EC*, 1 EUR. ENV'T REV., June 1987, at 20.

to thirty tons of pesticides to wash into the Rhine.<sup>5</sup> The accident destroyed aquatic life as a wave of toxic pollution flowed through Germany, France, and the Netherlands before finally reaching the sea.<sup>6</sup> Despite efforts in the Netherlands, chlorine pollution of the Rhine has increased in severity.<sup>7</sup>

The Mediterranean Sea has also had its share of problems. It has been characterized as a "communal sewer" and "one of the worst environmental problems in the world."<sup>8</sup> The most serious problems are caused by urban waste, oil pollution, industrial dumping, and exploitation of fish resources and protected habitats.

Acid rain is another major transnational environmental concern in Europe. It destroys forests, rivers, and lakes. It also devastates historic stone monuments and building materials. Acid rain is caused by emissions of sulfur and nitrogen oxides, typically from coal or petroleum combustion, which convert into highly reactive sulfuric acids when mixed with moisture in the air.<sup>9</sup> Acid rain has been connected to lung disease and death in animals.<sup>10</sup> One study showed that acid rain is a direct cause of an increased death rate in Rotterdam, especially among the elderly and those with heart and lung diseases.<sup>11</sup> Air pollution is a problem that often originates far from the region it impacts. For example, pollution from Germany's heavily industrialized Ruhr valley extends into Belgium and the Netherlands.<sup>12</sup>

What the above problems have in common is that they are not confined to one country alone, but extend beyond political boundaries to threaten the European Community as a whole. Transboundary pollution threatens shared natural resources such as river systems, air and water sheds, enclosed and semi-enclosed seas, such as the North

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5. *Id.* at 19. Although Switzerland is not a member of the European Economic Community, the accident near Basle is indicative of pollution problems that traverse national boundaries and affect EEC nations.

6. For a description of the chemical pollution warning system provided by the Convention for the Protection of the Rhine against Chemical Pollution, see Teclaff & Teclaff, *Transboundary Toxic Pollution and the Drainage Basin Concept*, in *TRANSBOUNDARY RESOURCES LAW* 62-63 (A. Utton & L. Teclaff eds. 1987).

7. *Id.* at 71.

8. Pastor, *The Mediterranean: A Sea with One of the Worst Environmental Problems in the World*, 1 *EUR. ENV'T REV.*, Dec. 1987, at 22.

9. L. HODGES, *ENVIRONMENTAL POLLUTION* 57-58 (2d ed. 1977). See also Likens & Bormann, *Acid Rain: A Serious Regional Environmental Problem*, 184 *SCIENCE* 1176-79 (1974).

10. L. HODGES, *supra* note 9, at 57.

11. *Id.* at 57-58.

12. *Id.* at 453.

Sea and the Mediterranean, adjacent estuaries and coastal waters, mountain chains, forests, and migratory animal species.<sup>13</sup> Transboundary pollution creates environmental problems which could be controlled more efficiently by the European Community, especially where national attempts at control have failed.<sup>14</sup>

The EEC has acted in a number of ways to combat transnational pollution. Since 1973, four environmental action programs have been introduced in order to effectuate the goal of achieving a cleaner environment. In 1987, the EEC passed the Single European Act ("SEA")<sup>15</sup> which codifies Community-wide environmental policy. The SEA sets out fundamental principles of prevention, which include control of pollution at the source, application of the "polluter pays" principle, and integration of environmental protection requirements into other Community policies.<sup>16</sup> The SEA instructs the Community, when defining policy, to "take as a base a high level of [environmental] protection."<sup>17</sup> In 1987, the European Year of the Environment was established to increase public awareness of the choices the Community faces regarding environmental protection.<sup>18</sup>

The Community's measures help set standards for protection and improvement of the environment, but the question still remains whether the individual states will actively commit themselves to the EEC's policy. Presently, EEC laws are not self-implementing.<sup>19</sup> Full

13. *Cooperation in the Field of the Environment Concerning Natural Resources Shared by Two or More States*: Report of the Executive Director, U.N. Doc. UNEP/GC/44 ¶ 86 (1975).

14. Kiss, *The Protection of the Rhine Against Pollution*, in *TRANSBOUNDARY RESOURCES LAW* 74 (A. Utton & L. Teclaff eds. 1987).

15. O.J. EUR. COMM. (No. L 169) 1-28 (1987).

16. Kromarek, *The Single European Act and the Environment*, 1 EUR. ENV'T REV., Oct. 1986, at 10. See also SEA Title VII, Article 130r, O.J. EUR. COMM. (No. L 169) at 11-12 (1987).

17. Kromarek, *supra* note 16, at 11. See also SEA Article 100a, O.J. EUR. COMM. (No. L 169) at 8 (1987).

18. O.J. EUR. COMM. (No. C 63) 1 (1986) (Council Resolution of 6 March 1986 on an Action Programme for the European Year of the Environment ("EYE")). The major themes of EYE are:

- respect for the environment and a rational use of natural resources are necessary for a sustained improvement of the quality of life
- investing in effective environmental management will contribute to economic growth and employment
- environmental concern must be part of every economic, industrial, agricultural and social activity
- environmental control and management is an international challenge in which the European Community has an important role to play.

Quoted in Fairclough, *The European Year of the Environment*, 1 EUR. ENV'T REV., Oct. 1986, at 36.

19. N. HAIGH, *EEC ENVIRONMENTAL POLICY AND BRITAIN* 5 (2d ed. 1987).

implementation can occur only by the EEC's member states adopting the Community's policy into national environmental laws and enforcing those laws.<sup>20</sup> Among the member states, implementation of the Community's directives regarding environmental protection is not uniform.<sup>21</sup> One reason is that members do not share the same level of political commitment to environmental protection. As a result of local perspectives, an overall improvement in environmental quality has not been achieved.<sup>22</sup> Assertions have been made that, until a uniform environmental commitment exists, transnational environmental pollution problems, such as the ones described above, will continue to plague Europe.<sup>23</sup> The Single European Act leaves open the question of whether the Community as a whole would be able to enact substantive environmental directives that would bind all the member states uniformly. This Comment suggests that the EEC can and should enact universally binding legislation in order to deal with transnational environmental pollution. These laws should emphasize uniform implementation and enforcement.

## II. EXISTING ENVIRONMENTAL LAW WITHIN THE EEC

### A. *Basic Principles and Goals Stress Unity Throughout the Community*

The European Economic Community was established in 1957 and was founded upon the notion of the "Four Freedoms." These are: the free movement of goods, workers, services, and capital.<sup>24</sup> The Four Freedoms were embodied in the Treaty of Rome ("Treaty"), signed by the six original member states<sup>25</sup> on March 25, 1957.<sup>26</sup> The preamble to the Treaty emphasizes that the free market concept should be based upon a notion of unity and collective action. It states that the member states of the EEC are:

[r]ecognizing that the removal of existing obstacles calls for

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20. *Id.*

21. Klatte, *The Past and Future of European Environmental Policy*, 1 EUR. ENV'T REV., Oct. 1986, at 32-33.

22. Haigh, *Assessing EC Environmental Policy: Unweaving the Spider's Web*, 1 EUR. ENV'T REV., Feb. 1987, at 40.

23. See *infra* notes 121-142 and accompanying text.

24. Dreyfuss, *supra* note 1, § 1.1.1.

25. The original six member states were France, West Germany, Italy, Holland, Belgium and Luxembourg. *Id.*

26. The Treaty gave birth to the EEC and Euratom, the European Atomic Energy Community. *Id.* § 1.1(C)(2). All references to the Treaty in this paper concern the EEC exclusively.

concerted action in order to guarantee steady expansion, balanced trade and fair competition;

[a]nxious to strengthen the unity of their economies and to ensure their harmonious development by reducing the differences existing between the various regions and the backwardness of the less favoured regions;

[d]esiring to contribute, by means of a common commercial policy to the progressive abolition of restrictions on international trade.<sup>27</sup>

In addition, the preamble expressly states that unification is paramount and the member states are "[r]esolved by thus pooling their resources to preserve and strengthen peace and liberty, and calling upon the other peoples of Europe who share their ideal to join in their efforts."<sup>28</sup> Thus, if the Community is to be successful, the member states must unify to support the Community and abstain from any action that could jeopardize the solidarity of the Community's policies.

The Community's unification policies are not limited to economics; social goals are also included. For instance, the preamble states that the member states are "[r]esolved to ensure the economic and social progress of their countries by common action to eliminate the barriers which divide Europe . . . [a]ffirming as the essential objective of their efforts the constant improvement of the living and working conditions of their peoples . . . ."<sup>29</sup> Furthermore, Article 2 of the Treaty states that the Community

has as its task, by establishing a common market and progressively approximating the economic policies of Member States, to promote throughout the Community a harmonious development of economic activities, a continuous and balanced expansion, an increase in stability, an accelerated raising of the standard of living and closer relations between the States belonging to it.<sup>30</sup>

Thus, in addition to the economic language of the Treaty, the EEC clearly intended to equalize the standard of living across political boundaries. This goal of unification and improvement of the stan-

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27. *Id.* § 1.2(D)(2)(a).

28. *Id.* § 1.1(C)(2).

29. *Id.* § 1.2(D)(2)(b).

30. Article 2 of the Treaty of Rome, quoted in Vandermeersch, *The Single European Act and the Environmental Policy of the European Economic Community*, 12 EUR. L. REV. 407, 408 (1987).

dard of living has been translated into a basis for environmental protection. It will be described in more detail below.

*B. The EEC Legislative Structure—Commission,  
Council and Parliament*

To have a complete understanding of the EEC's transnational environmental protection problems, a brief look at the legislative structure of the EEC is necessary. The structure carries forward the unifying theme of dependency and cooperation found in the Community's basic principles and goals.

The three law-making institutions of the EEC are set forth in Part 5 of the Treaty. They are the Commission, the Council and the European Parliament.<sup>31</sup>

1. The Commission

Article 10(1) of the Treaty sets forth the functions of the Commission.<sup>32</sup> The members of the Commission represent the Community's interests as a whole and are "completely independent in the performance of their duties."<sup>33</sup> They may not seek guidance from nor be influenced by any government or individual.<sup>34</sup> No more than two members may be appointed from each member state.<sup>35</sup> The functions and powers of the Commission include:

- (1) [e]nsuring that the Treaty's provisions and the measures taken by the institutions pursuant thereto are applied;
- (2) [f]ormulating recommendations or delivering opinions on matters dealt with in the Treaty, if it expressly so provides or if the Commission considers it necessary;
- (3) [h]aving its own power of decision and participating in the shaping of measures taken by the Council and by the Assembly as provided for by the Treaty;
- (4) [e]xercising the powers conferred on it by the Council for the implementation of the rules that the latter lays down.<sup>36</sup>

The Commission also exercises a policy-making function. It can either formulate or revise guidelines so that the Community may operate on common policies not strictly provided for in the Treaty it-

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31. Dreyfuss, *supra* note 1, § 1.3.

32. *Id.*

33. *Id.* § 1.3(A)(1).

34. *Id.*

35. *Id.*

36. *Id.* § 1.3(A)(3).

self.<sup>37</sup> The Treaty, therefore, can be a flexible charter which evolves continuously, rather than a rigidly static constitution.<sup>38</sup> In essence, the Treaty forms a skeleton that the Commission can flesh out with details as needed for specific situations.<sup>39</sup>

Although the Commission is essentially an executive branch, it also fulfills a semi-legislative function by submitting proposals to the Council for new laws, recommendations or opinions whenever necessary.<sup>40</sup> The Commission consults with the Council and also prepares informal studies and reports at the Council's request.<sup>41</sup> The Commission can make decisions itself where the Treaty specifically so provides.<sup>42</sup>

## 2. The Council

In contrast to the role of the Commission, the Council of Ministers represents the various national points of view. It is composed of one member from each member state government.<sup>43</sup> The Council alone has the power to make important decisions relating to the Community's development.<sup>44</sup> "Pursuant to Article 145 of the Treaty, the Council must ensure that the objectives of the Treaty are attained, including the 'co-ordination of the general economic policies of the Member States.'"<sup>45</sup>

Legislation in the EEC is promulgated by the Commission and the Council working together. The Commission submits proposals regarding environmental protection to the Council which are considered for adoption and promulgation as EEC directives.<sup>46</sup> The Council has sole discretion to adopt legislation proposed by the Commission. Also, the Council may act on its own initiative if at least six Council members vote to do so.<sup>47</sup> Unfortunately, because of the Council's far-reaching discretion to reject the Commission's proposals and because the Council ministers represent national points of view, "[n]ational economic and political self interest has tended to prevent the EC

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37. *Id.* § 1.3(A)(3)(c).

38. *Id.*

39. *Id.*

40. *Id.* § 1.3(A)(3)(c).

41. *Id.*

42. *Id.*

43. *Id.* § 1.3(B)(1).

44. *Id.* § 1.3(B).

45. *Id.* § 1.3(B)(1).

46. *Id.* § 1.3(A)(3). See also N. HAIGH, *supra* note 19, at 2.

47. Dreyfuss, *supra* note 1, § 1.3(B)(2).



Council from adopting and promulgating various environmental protection proposals of the EC Commission into EEC law."<sup>48</sup> Thus, each Council member's self-interest may be a barrier to a more comprehensive and enforceable transnational pollution policy.

### 3. The Parliament

The European Parliament (which is labeled the "Assembly" in the original Treaty) consists of members who are elected directly. Unlike many modern parliaments, the European Parliament is not a legislative body; rather it advises the Council regarding proposed legislation.<sup>49</sup> Nevertheless, its voice must be heard before the Council can adopt a law.<sup>50</sup>

Each element of the EEC legislative process combines to meet the unification objectives of the Treaty. Thus, the objectives are to be achieved through a coordination of policy and law-making between the Community and the member states. "The European Community's environmental policy is effectively embodied in items of Community legislation which then must be implemented in the Member States."<sup>51</sup> The coordination of Community and member state legislation is defined as "approximation." Article 3(h) states, "the approximation of the laws of Member States [is necessary] to the extent required for the proper functioning of the common market."<sup>52</sup> To meet this objective, the members must take "all appropriate measures to ensure fulfillment of the obligations arising out of the Treaty or resulting from action by the institutions of the Community."<sup>53</sup> Such measures include passing national laws to facilitate the Community's objectives and abstaining "from any measures which could jeopardize the attainment of the [Community's] objectives."<sup>54</sup>

### C. EEC's Environmental Policy

The early activities of the Community were motivated chiefly by economic concerns. The primary concern was to unify the market

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48. Bentil, *Implementation of Common Market Environmental Protection Laws*, 128 SOLIC. J. 393, 393 (1984).

49. Dreyfuss, *supra* note 1, § 1.3(C)(4)(a). "The Assembly of the European Communities is intended to inject some element of democratic control into the operation of the Community." *Id.* § 1.3(C)(1).

50. *Id.* § 1.3(C)(4)(a).

51. HAIGH, *supra* note 19, at 1.

52. Dreyfuss, *supra* note 1, § 1.2(D)(2)(a).

53. *Id.* § 1.2(D)(2)(c).

54. *Id.*

and to eliminate obstacles that would prevent free movement of products between the member states.<sup>55</sup> Awareness of the need for environmental protection grew rapidly in the 1970s.<sup>56</sup> The Council became increasingly more conscious of the need to pay special attention to the intangible burdens placed on society by an unclean environment.<sup>57</sup> With the EEC's policy objectives in mind,<sup>58</sup> representatives from the original six member states held a summit meeting in October, 1972.<sup>59</sup> For the first time, they departed from the essentially economic aims of the Treaty and focused their attention on protecting the environment.<sup>60</sup> The resulting declaration stated that

[e]conomic expansion is not an end in itself: its first aim should be to enable disparities in living conditions to be reduced . . . . It should result in an improvement in the quality of life as well as in standards of living. As befits the genius of Europe, particular attention will be given to intangible values and to protecting the environment.<sup>61</sup>

The authority for the declaration was not derived from the express language of the Treaty because the Treaty did not specifically address the issue of environmental pollution. However, at the 1972 summit, the representatives of the member states interpreted Articles 100 and 235 of the Treaty as the legal basis for their environmental policy.<sup>62</sup> Article 100 permits the Council to issue directives to existing member states to make any legislation affecting the common market consistent with EEC policy.<sup>63</sup> Article 235 permits the Community to develop policy in areas not directly regulated by the Treaty, if necessary to further the goals in the operation of the common mar-

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55. Vandermeersch, *supra* note 30, at 408.

56. *Id.* at 409.

57. *Id.*

58. Dreyfuss, *supra* note 1, § 1.1(C)(2).

59. Vandermeersch, *supra* note 30, at 409.

60. *Id.*

61. Quoted in ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION, NINTH REPORT: LEAD IN THE ENVIRONMENT 42 (1983) [hereinafter NINTH REPORT]. See also Krämer, *The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law*, 24 COMMON MKT. L. REV. 659, 660 (1987).

62. Krämer, *supra* note 61, at 661. See also Kromarek, *supra* note 16, at 12.

63. Article 100 states:

The Council shall, acting unanimously on a proposal from the Commission, issue directives for the approximation of such provisions laid down by law, regulation or administrative action in Member States as directly affect the establishment or functioning of the common market.

Quoted in Kromarek, *supra* note 16, at 10-12.

ket.<sup>64</sup> Thus, the Community's combined use of Article 100 and Article 235 was deemed to permit the adoption of environmental legislation whenever it related to the functioning of the common market.<sup>65</sup>

During the 1972 summit, the Council invited the Commission to develop an environmental policy for the Community.<sup>66</sup> The Commission responded by developing a series of five-year action programs, the first of which was unveiled on November 22, 1973.<sup>67</sup> The purposes of the action programs were two-fold. First, they outlined specific proposals for future legislation that the Commission would submit to the Council. Second, they provided the opportunity to suggest new directions and broad objectives for environmental policy.<sup>68</sup> These objectives are not self-executing but must be adopted by the Council before they constitute true items of Community legislation.<sup>69</sup>

The First Action Programme called for the harmonization of national policies to improve the overall quality of life for the Community.<sup>70</sup> It also set the Community's policy objectives<sup>71</sup> and proposed environmental protection requirements establishing pollution levels that must be met after a certain date.<sup>72</sup>

The Second Action Programme followed in May, 1977. It essen-

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64. Article 235 states:

If action by the Community should prove necessary to attain, in the course of the operation of the common market, one of the objectives of the Community and this Treaty has not provided the necessary powers, the Council shall, acting unanimously on a proposal from the Commission and after consulting the Assembly, take the appropriate measures.

*Id.* at 411.

65. *Id.*

66. NINTH REPORT, *supra* note 61, at 42.

67. HAIGH, *supra* note 19, at 9.

68. *Id.* at 11.

69. *Id.*

70. The Community's statement of environmental policy objectives made no references that such objectives should be considered exclusively in obtaining or preserving a unified market. However, this does not mean that economic considerations will not be part of the decision-making process when implementing environmental policies. Vandermeersch, *supra* note 30, at 408.

71. The Commission proposed in the First Action Programme that the Community should: "[r]educe pollution and nuisances; improve the natural and urban environments; deal with environmental problems caused by the depletion of certain natural resources; and promote awareness of environmental problems and education." O.J. EUR. COMM. (No. C 112) 1 (1973), *quoted in* HAIGH, *supra* note 19, at 9.

72. For example, in response to the First Action Programme, the Commission prepared a draft directive specifying air quality standards for lead, sulfur dioxide, carbon dioxide and nitrogen oxides. ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION, FIFTH REPORT: AIR POLLUTION CONTROL: AN INTEGRATED APPROACH 50 (Jan. 1976).

tially updated the First Action Programme. Once again, the objective was unity and harmony among the member states to combat pollution.<sup>73</sup>

The promotion throughout the Community of a harmonious development of economic activities and a continuous and balanced expansion, which constitute the paramount purpose of the Community (Article 2 of the Treaty), *cannot now be imagined* in the absence of an effective campaign to combat pollution and nuisances or of an improvement in the quality of life and the protection of the environment.<sup>74</sup>

The Third Action Programme (1982-1986) delineated a far more coherent statement of policies and aims than that of the first two programs. The shift in emphasis was illustrated by the establishment of a general framework for the management of resources intended to meet future needs.<sup>75</sup> It required that the Community adopt preventive measures "even where the subject matters in question were not yet regulated by the member states."<sup>76</sup> It also stated that future economic and social development depended upon protection of the environment.<sup>77</sup> The program emphasized the following issues:

- (1) concern for the environment must be integrated into the planning of all activities, such as agriculture, energy, industry, transport, and tourism;
- (2) transboundary pollution should be combatted;
- (3) the transfrontier transport of waste, especially toxic and dangerous waste, should be reduced or eliminated;
- (4) pollution and nuisance should be reduced at its source;
- (5) clean technology should be developed, using the coordinated exchange of information between the member states;
- (6) environmental assessments should be made of all environmental impacts where human activity is likely to have significant effects on the environment.<sup>78</sup>

The Fourth Action Programme<sup>79</sup> (1987-1992) states that emphasis must be placed upon enforcement of existing EEC legislation. This

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73. Klatte, *supra* note 21, at 32.

74. Quoted in NINTH REPORT, *supra* note 61, at 42 (emphasis added).

75. *Id.* at 43.

76. Vandermeersch, *supra* note 30, at 409.

77. Klatte, *supra* note 21, at 32.

78. NINTH REPORT, *supra* note 61, at 44.

79. O.J. EUR. COMM. (No. C 70) 1 (1987); Klatte, *supra* note 21, at 33.

goal results from the member states notoriously failing to apply most EEC environmental directives correctly or expediently.

#### *D. Impact of the Single European Act*

On July 1, 1987, the Treaty was amended by the SEA.<sup>80</sup> In the SEA, the member states pledged to develop economic unification and to eliminate all existing barriers to free trade and movement of people, services, capital and goods by 1992.<sup>81</sup> The states sought to achieve this goal through deregulation, standardization and unification of all commerce among the states.<sup>82</sup> For the first time, the environmental policy of the EEC was given official recognition and "status befitting its position as one of the Community's fundamental policies."<sup>83</sup>

Environmental policy has legal status under two provisions of the SEA, namely Article 130r-t<sup>84</sup> and Article 100a.<sup>85</sup> These articles delineate the objectives and basic principles of the Community's envi-

80. O.J. EUR. COMM. (No. L 169) 1 (1987).

81. The new Article 8a defines the "internal market" as "an area without frontiers in which the free movement of goods, persons, services and capital is ensured." Vandermeersch, *supra* note 30, at 417. See also Pine, *Europe's Goal of Unified Market Spurs Hope, Fear*, L.A. Times, Sept. 20, 1988, at A12, col. 1.

82. Pine, *supra* note 81, at A12, col. 1.

83. Vandermeersch, *supra* note 30, at 429.

84. The texts of Articles 130r, 130s, and 130t are as follows:

##### Article 130r

1. Action by the Community relating to the environment shall have the following objectives:

- (i) to preserve, protect and improve the quality of the environment,
- (ii) to contribute towards protecting human health,
- (iii) to ensure a prudent and rational utilization of natural resources.

2. Action by the Community relating to the environment shall be based 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. Environmental protection requirements shall be a component of the Community's other policies.

3. In preparing its action relating to the environment, the Community shall take account of:

- (i) available scientific and technical data,
- (ii) environmental conditions in the various regions of the Community,
- (iii) the potential benefits and costs of action and or lack of action,
- (iv) the economic and social development of the Community as a whole and the balanced development of its regions.

4. The Community shall take action relating to the environment to the extent to which the objectives referred to in paragraph 1 can be attained better at Community level than at the level of the individual Member States. Without prejudice to certain measures of a Community nature, the Member States shall finance and implement the other measures.

5. Within their respective spheres of competence, the Community and the Member States shall cooperate with third countries and with the relevant international organizations. The arrangements for Community cooperation may be the subject of agree-

ronmental policy. Article 130r(1) states that the Community's environmental objectives are "(i) to preserve, protect and improve the quality of the environment, (ii) to contribute towards protecting human health, [and] (iii) to ensure a prudent and rational utilization of natural resources."<sup>86</sup> Article 130r(2) states that these objectives

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ments between the Community and the third parties concerned, which shall be negotiated and concluded in accordance with Article 228.

The previous paragraph shall be without prejudice to Member States' competence to negotiate in international bodies and to conclude international agreements.

#### Article 130s

The Council, acting unanimously on a proposal from the Commission and after consulting the European Parliament and the Economic and Social Committee, shall decide what action is to be taken by the Community.

The Council shall, under the conditions laid down in the preceding subparagraph, define those matters on which decisions are to be taken by a qualified majority.

#### Article 130t

The protective measures adopted in common pursuant to Article 130s shall not prevent any Member State from maintaining or introducing more stringent protective measures compatible with this Treaty.

O.J. EUR. COMM. (No. L 169) at 11-12 (1987).

85. The text of Article 100a is as follows:

1. By way of derogation from Article 100 and save where otherwise provided in this Treaty, the following provisions shall apply for the achievement of the objectives set out in Article 8a. The Council shall, acting by qualified majority on a proposal from the Commission in cooperation with the European Parliament and the Economic and Social Committee, adopt the measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States which have as their object the establishment and functioning of the internal market.

2. Paragraph 1 shall not apply to fiscal provisions, to those relating to the free movement of persons nor to those relating to the rights and interests of employed persons.

3. The Commission, in its proposals laid down in paragraph 1 concerning health, safety, environmental protection and consumer protection, will take as a base a high level of protection.

4. If, after the adoption of a harmonization measure by the Council acting by a qualified majority, a Member State deems it necessary to apply national provisions on grounds of major needs referred to in Article 36, or relating to protection of the environment or the working environment, it shall notify the Commission of these provisions.

The Commission shall confirm the provisions involved after having verified that they are not a means of arbitrary discrimination or a disguised restriction on trade between Member States.

By way of derogation from the procedure laid down in Articles 169 and 170, the Commission or any Member State may bring the matter directly before the Court of Justice if it considers that another Member State is making improper use of the powers provided for in this Article.

5. The harmonization measures referred to above shall, in appropriate cases, include a safeguard clause authorizing the Member States to take, for one or more of the non-economic reasons referred to in Article 36, provisional measures subject to a Community control procedure.

*Id.* at 8.

86. It should be noted that during the negotiations leading up to the SEA a more extensive description of the goals of environmental policy was proposed. Among them was the goal

shall be achieved through the principles of pollution prevention, pollution control at its source, and implementation of the "polluter pays" principle.<sup>87</sup> Potentially, the most significant new provision (which was first introduced in the Third Environmental Action Programme) is the "integration principle." Set forth in Article 130r(2) of the SEA, this provision states that "environmental protection requirements shall be a component of the Community's other policies."<sup>88</sup> Once applied, this provision will have far-reaching ramifications on other policy areas such as agriculture and manufacturing processes.<sup>89</sup>

Article 130r(4) indicates that the appropriate body shall take action at the Community level, rather than at the local level, to effectively realize the Community's environmental objectives outlined in Article 130r(1).<sup>90</sup> This provision, known as the principle of subsidiarity, expressly reserves residual jurisdiction to the member states.<sup>91</sup>

Article 100a, which addresses the internal market, also discusses environmental protection.<sup>92</sup> When the Commission drafts proposals concerning health, safety, environmental protection, or consumer protection, they must be based on a "high level of protection."<sup>93</sup> Therefore, environmental protection should become an essential component of legislation drafted for the internal market.

However, the Treaty amendments are ambiguous and there is no criteria to determine whether a measure comes under the heading of "internal market" (Article 100a) or "environment" (Article 130s).

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of "prevention and indemnification of damage caused by dangerous industrial activities or by the use or handling of dangerous or toxic substances or products, in particular when more than one Member State is concerned by the risks caused or the need for indemnification." Vandermeersch, *supra* note 30, at 413. This element clearly would have given the Community more power in the area of setting rules pertaining to transnational pollution. However, as noted by Vandermeersch, "a Treaty provision setting forth the objectives of a Community policy need not go into that amount of detail and that such policy would be better served if only certain general goals were set." *Id.* However, the proposal of such an element suggests that the Commission intended a more Community-wide approach to international environmental problems. O.J. EUR. COMM. (No. L 169) at 11-12 (1987).

87. The First Action Programme states that the principle that the polluter should pay for the damage "should be defined at [the] Community level." O.J. EUR. COMM. (No. C 112) at 6 (1973), *quoted in* Vandermeersch, *supra* note 30, at 415. *See also* Kromarek, *supra* note 16, at 11.

88. HAIGH, *supra* note 19, at 11.

89. Kromarek, *supra* note 16, at 11.

90. Vandermeersch, *supra* note 30, at 422.

91. *Id.*

92. O.J. EUR. COMM. (No. L 169) at 8 (1987).

93. *Id.*

The importance of this difference involves, among other things, how many Council votes are required to pass a measure. Before the SEA was passed, the Council had to pass all environmental legislation unanimously after consultation with the Parliament under either Article 100 or 235.<sup>94</sup> Under Article 130 of the SEA, a measure requires passage by unanimous vote.<sup>95</sup> However, under Article 100a, a qualified majority of the Council can pass legislation concerning environmental protection.<sup>96</sup> This requirement could interfere with efforts to control transnational pollution because, according to the Treaty's rules for qualified majority voting, the votes of the more populous countries have greater weight than those of smaller countries.<sup>97</sup> Many pro-environment member states expressed strong misgivings about majority voting because they feared it would lead to a lowering of standards in the already sensitive area of environmental protection.

It is difficult to determine whether a measure falls under Article 100a or Article 130. Advocates for environmental policy want the qualified majority rule of Article 100a, while other member states would prefer the unanimity rule of Article 130a.<sup>98</sup> Thus, under the SEA, the Community-wide jurisdiction to regulate environmental problems can cause considerable controversy and uncertainty<sup>99</sup> because the Act fails to provide clear-cut criteria to determine when Article 130r(4) (objectives better attained at the Community level) should govern.<sup>100</sup>

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94. Vandermeersch, *supra* note 30, at 411.

95. Under certain conditions, not specified in the text of the SEA, the Council shall identify matters "on which decisions are to be taken by a qualified majority." However, according to Vandermeersch, decision-making will remain, in principle, on a unanimous basis. *Id.* at 425.

96. A qualified majority system in the Council adjusts the voting power of each member state according to its population, while also safeguarding the interests of the smaller countries. The distribution of votes is as follows: France, Italy, United Kingdom, West Germany—ten votes each; Spain—eight votes; Belgium, Greece, the Netherlands, Portugal—five votes each; Denmark and Ireland—three votes each; and Luxembourg—two votes. Since at least 54 votes are required to pass a measure, at least seven member states must support it. Lomas, *Environmental Protection, Economic Conflict and the European Community*, 22 MCGILL L.J. 506, 513 n.23 (1988).

97. Vandermeersch suggests that the language to "take as a base a high level of protection" (Article 100a) may have been a compromise created to allay such fears. Unfortunately, the phrase itself is vague and open to many interpretations, including less stringent standards. Vandermeersch, *supra* note 30, at 417.

98. Kromarek, *supra* note 16, at 12.

99. Vandermeersch, *supra* note 30, at 427.

100. Vandermeersch proposes that only those measures which have as their object the establishment and functioning of the internal market should arise under Article 100a. In case



Regardless of ambiguities in the SEA, the EEC has the legal authority to implement stringent environmental regulations based on the language of the SEA and the EEC directive procedures. Thus, the EEC possesses the authority and potential to control its transnational environmental problems.

### III. BARRIERS TO UNITY IN TRANSNATIONAL POLLUTION CONTROL

The problems of transnational pollution continue to plague the European Community despite its environmental policy and institutional framework for pollution control. For example, the degree of environmental degradation in the Mediterranean Sea has increased so dramatically that the Mediterranean is one of the most contaminated seas in the world.<sup>101</sup> Great quantities of waste are emitted each year, particularly near the coastal areas.<sup>102</sup> High BOD pollutants,<sup>103</sup> nitrogen, phosphorus, and mercury wash down from rivers, while mineral oil and phenols are emitted from coastal industry.<sup>104</sup> The EEC has joined the United Nations Environment Programme in a regional plan of cooperation which has achieved only marginal success in cleaning up the Mediterranean.<sup>105</sup>

Toxic chemical pollution of the Rhine has received enormous publicity because of the "Sandoz incident" in which a warehouse containing chemical pesticides caught fire near Basle, Switzerland on November 1, 1986.<sup>106</sup> Ten to thirty tons of chemicals washed into the Rhine, causing a wave of pollution which killed aquatic life throughout France, West Germany and the Netherlands.<sup>107</sup> Subsequent investigation uncovered evidence that despite EEC legislation prohibiting such discharges, toxic discharges and chemical pollution

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of doubt, preference should be given to Article 130s since the provisions in Article 100a should be temporary only until December, 1992. *Id.* at 419.

101. Pastor, *supra* note 8, at 22. Pastor states that the most critical problems in the Mediterranean are urban waste, oil pollution, industrial dumping, pesticides, over-exploitation and desertification. *Id.*

102. *Id.* at 23.

103. BOD pollutants are biological oxygen demand pollutants—those that deplete the oxygen dissolved in water. "Sewage and other oxygen-demanding wastes are classified as water pollutants because their degradation leads to oxygen depletion, which affects (and even kills) fish and other aquatic life." HODGES, *supra* note 9, at 170.

104. Whipple, *Land-Based Sources of Marine Pollution and National Controls*, in *THE NEW NATIONALISM AND THE USE OF COMMON SPACES* 48 (J. Charney ed. 1982).

105. *Id.* at 47.

106. Searles, *supra* note 4, at 19.

107. *Id.*

have been occurring for years and an accident such as this is not unique.<sup>108</sup> Moreover, the European Parliament feared that knowledge of the Sandoz accident would lead to other companies discharging toxic chemicals into the Rhine under cover of the Sandoz accident.<sup>109</sup> The Parliament drafted a resolution which required stricter compliance with its directives and consequently announced that other companies that had discharged chemicals into the Rhine should be held accountable with Sandoz for the ecological damage and clean-up costs.<sup>110</sup>

The pollution of the North Sea continues to increase. Its wetlands and estuaries, protected from the scouring currents of the open ocean act as catch basins for Northern Europe's water pollution.<sup>111</sup> These wetlands and estuaries are vital to "North Sea fisheries, to birds which migrate across large parts of Europe and even Africa, [and] to the health and well-being of the populations in the adjacent regions"<sup>112</sup> of the Netherlands, West Germany and Denmark. New research has uncovered long-range air pollution damage through atmospheric deposition. In addition, ships and oil platforms continue to discharge oil into the North Sea.<sup>113</sup> Thus, transnational pollution continues to increase, despite efforts by the EEC to implement environmental protection policies.

Three major problems face the Community in its efforts to enforce more stringent directives designed to combat international pollution. These problems are: (1) the principle of subsidiarity within the SEA; (2) the Community's inability to ensure uniform enforcement of EC directives among the member states; and (3) ideological differences between the member states that prevent standard regulations for the entire Community.

#### *A. The Principle of Subsidiarity Within the SEA*

The principle of subsidiarity in Article 130r(4) contains a particularly troublesome obstacle to the development of a unified transna-

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108. *Id.* at 20.

109. *Id.*

110. The Sandoz incident was further complicated by the fact that Switzerland, the source of the accident, was not a member of the EEC. Nevertheless, the European Parliament considered the incident a springboard to address the EEC's concern for reform and enforcement of its directives. *Id.* at 20-21.

111. von Moltke & Haigh, *supra* note 2, at 12.

112. *Id.*

113. *Id.*

tional pollution control because it allows member states to have residual jurisdiction over Community environmental policy. According to Vandermeersch, this residual jurisdiction is a "step backwards" compared to previous environmental policies.<sup>114</sup> Under former Articles 100 and 235, "the Community had virtually unlimited competence to regulate in the field of the environment."<sup>115</sup> Furthermore, neither guidelines nor criteria have been developed to determine which objectives are more effectively pursued at the Community level, rather than at the member state level. According to one scholar, "this is really the vaguest of formulae and one which will perplex those responsible for judging whether a particular action is likely to be more effective at [the Community level] rather than at national level."<sup>116</sup> Moreover, subsidiarity is a particularly serious problem when trying to combat the effects of transnational pollution because the Community's power is not sufficiently defined in the SEA to overcome inequalities of political commitment from individual member states.

In contrast, Krämer argues that the consequence of Article 130r(4) should not be regarded as a "step backwards," but rather as a "political guideline for the Community institutions—in particular Council, Commission and Parliament—on which the Community should base its political legislative actions."<sup>117</sup> The provision "corresponds to the interpretation rules for the application of [former] Articles 100 and 235 of the EEC Treaty"<sup>118</sup> from which environmental policy was justified before the SEA. Furthermore, Krämer asserts that Community interpretation of the Treaty is a dynamic and fluid concept in contrast to the static nature of national constitutions.<sup>119</sup> As before, environmental protection will be weighed with other political circumstances.<sup>120</sup>

### *B. Lack of Uniform Enforcement for EEC Directives*

A major problem for the EEC is its inability to uniformly enforce its directives so that the same standards apply equally to every member state. This is a structural problem within the EEC that leads to a

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114. Vandermeersch, *supra* note 30, at 422.

115. *Id.*

116. Kromarek, *supra* note 16, at 11.

117. Krämer, *supra* note 61, at 668.

118. *Id.*

119. *Id.* at 666.

120. *Id.*

variance in the stringency of regulations among the member states.<sup>121</sup> Directives are most often used in Community legislation for environmental matters.<sup>122</sup> Although the directive states the results the Community expects to achieve, it leaves the methods of implementation in the hands of the member states.<sup>123</sup> This division of power gives the member state the flexibility to choose the form and the desired method of implementation.<sup>124</sup> Once a directive is issued, the member state is required to respond with a "compliance letter" within a specified time.<sup>125</sup>

Unfortunately, in the area of transnational pollution, a number of problems have arisen because of this division of power within directives. Member states often do not implement the directives completely or on time.<sup>126</sup> The vague and ambiguous language of the directives leads to contradictory interpretations among the individual member states and, thus, contradictory implementation and enforcement.<sup>127</sup> For example, both Directive 84/631,<sup>128</sup> on trans-frontier shipment of hazardous waste, and Directive 78/319,<sup>129</sup> on toxic and dangerous waste, apply to waste contaminated by specified substances "of such a nature, in such quantities or in such concentrations as to constitute a risk to health or to the environment."<sup>130</sup> Thus, member states are left to establish the quantity or the concentration that will

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121. du Vivier, *Preventing Waste and Managing the Burden of the Past*, 2 EUR. ENV'T REV., Mar. 1988, at 11.

122. HAIGH, *supra* note 19, at 2.

123. *Id.* Other legislation, such as regulations, are rarely used for environmental matters; rather, they are used for more precise matters such as finance or agriculture. Attempts by members of the Community to establish environmental control by regulation have been fruitless. For example, an attempt was made to pass a regulation concerning the transborder movement of dangerous waste. O.J. EUR. COMM. (No. C 186) at 3-17 (1983). The Council transformed it back into a directive (as it had originally been proposed by the Commission). Vandermeersch, *supra* note 30, at 423. To date, other EEC environmental regulations are: Regulation on Implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora, O.J. EUR. COMM. (No. L 344) 1 (1983); Regulation on Improving the Efficiency of Agricultural Structures, O.J. EUR. COMM. (No. L 93) 1 (1985) (to protect environmentally sensitive areas); Regulation on Common Rules for Imports of Whales or Other Cetacean Products, O.J. EUR. COMM. (No. L 39) 1 (1981); and Regulation on the Protection of the Community's Forests Against Atmospheric Pollution, O.J. EUR. COMM. (No. L 326) 1 (1986).

124. HAIGH, *supra* note 19, at 5.

125. *Id.*

126. Vandermeersch, *supra* note 30, at 424.

127. *Id.*

128. *Id.*

129. *Id.*

130. *Id.*

trigger application of the directives.<sup>131</sup> This can lead to contradictory standards between neighboring member states and serious problems in implementation and enforcement. This is especially true with transborder shipment of wastes which involve two member states.<sup>132</sup>

The division of power also interferes with the EEC's efforts to provide uniform treatment of certain subject matter that is more efficiently dealt with on a Community level, as evidenced by Directive 67/548.<sup>133</sup> This so-called sixth amendment attempts to regulate the classification, packaging and labeling of dangerous substances.<sup>134</sup> In 1981, there were seven discrepancies in implementation in the United Kingdom alone. For example:

- (1) although the Directive requires "an inventory of existing substances" the United Kingdom's Health and Safety Commission ("HSC") failed to develop one;
- (2) the Directive "extends to the protection of the natural environment," but the HSC proposals were principally designed to assess a substance's harmful effects on people; they do not address the potential harmful effects that a substance could have on the environment; and
- (3) the Directive contains a more specific provision for implementing further tests and providing more extensive information to the Community than was included in the HSC proposal.<sup>135</sup>

Similarly, following the Sandoz incident, the European Parliament re-examined Directive 82/501 that regulated industrial chemical hazards.<sup>136</sup> The Parliament found that the EEC needed to strengthen and more vigorously enforce the Directive which originally required full implementation by the member states by January 8, 1984. However, by 1986, Ireland and Luxembourg had not implemented the Directive at all, while the Netherlands, Belgium, Italy, and Greece had implemented it only partially.<sup>137</sup> Of the fifty-nine amendments proposed following the Sandoz incident, most suggested a more stringent directive as well as stronger enforcement of it.<sup>138</sup> The Parliament re-

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131. HAIGH, *supra* note 19, at 140-41.

132. *Id.*

133. O.J. EUR. COMM. (No. L 259) at 10-28 (1979) (as amended by Directive 79/831).

134. HAIGH, *supra* note 19, at 235.

135. *Id.* at 242.

136. EEC Directive 82/501, O.J. EUR. COMM. (No. L 230) 1 (1982) (known as the Seveso Directive), *cited in* Searles, *supra* note 4, at 23.

137. By 1986, infringement procedures had commenced before the EEC Court of Justice. Searles, *supra* note 4, at 22.

138. *Id.* at 21.

jected fundamental changes in the Directive, such as suggestions for increased public access to information about the manufacturers.<sup>139</sup> However, the Parliament "remained quite critical of the Commission's enforcement of implementation by the member states."<sup>140</sup> Notwithstanding the Parliament's reluctance to implement fundamental changes, the amendments which increase the severity of the directives are now in force.<sup>141</sup>

Therefore, due to the lack of uniformity of implementation among the member states, some implementing laws are less stringent than others. Consequently, the countries with stricter directives bear an unequal economic burden, which interferes with the Community's ideal of a unified market. According to Krämer,

[a]n asynchronous approach by the Member States harbours a renewed risk for the Community as a whole of imbalances, distortion of competition, and deflection of trade flows, etc. . . . It also contradicts the requirement for balanced development of the Community's regions, a requirement enshrined in the environment section itself in Article 130r(3).<sup>142</sup>

### C. Ideological Differences

The ideological disputes that exist among the member states create variances in the states' compliance with the EEC environmental directives. Member states often differ substantially in their ideological approaches to regulation of the environment.<sup>143</sup> For example, some member states advocate the uniform emissions standard approach to river water pollution, while other member states advocate the environmental quality objective approach ("EQO").<sup>144</sup> Differences such as these have led to divergent interpretations of EEC directives by the member states.<sup>145</sup>

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139. *Id.* at 22.

140. *Id.*

141. EEC Directive 87/216, O.J. EUR. COMM. (No. L 85) 1 (1987), cited in HAIGH, *supra* note 19, at 254.

142. Krämer, *supra* note 61, at 668. For a discussion of asynchronous implementation, see *Harmonisation of Laws: Use or Abuse of the Powers Under the EEC Treaty?*, 3 EUR. L. REV. 461 (1978). See also Note, *Economic Implications of European Transfrontier Pollution: National Prerogative and Attribution of Responsibility*, 11 GA. J. INT'L & COMP. L.J. 519 (1981).

143. HAIGH, *supra* note 19, at 13. For an interesting comparative study of the conceptual and language differences concerning European environmental protection, see Boehmer-Christiansen, *Pollution Control or Umweltschutz?*, 2 EUR. ENV'T REV., Mar. 1988, at 6.

144. Vandermeersch, *supra* note 30, at 420.

145. HAIGH, *supra* note 19, at 13.

The EQO approach attempts to control pollution by measuring the amount of harm done to the ambient quality of the environment itself.<sup>146</sup> It detects pollution from non-point or diffuse sources in addition to direct discharges from point sources.<sup>147</sup> The "controls will be most stringent where the environment is most vulnerable . . . [and] [i]ndustrialists will be encouraged to locate where the receiving environment can best tolerate the discharge."<sup>148</sup> Therefore, abatement regulations would only burden industries to the extent necessary to meet the overall objective, which is to provide a non-polluted aquatic environment.<sup>149</sup>

The United Kingdom favors the EQO approach, which measures the ambient quality of water at points other than the effluent source.<sup>150</sup> The United Kingdom takes advantage of this approach because the high volume of water that flows in its relatively short rivers washes the pollution into the ocean very quickly. Thus, when measured by the ambient quality, the United Kingdom's water is typically cleaner than the longer, slower rivers of Continental Europe where pollutants tend to collect.<sup>151</sup>

Other member states favor the uniform emissions standard ("UES") approach. This approach regulates emissions at the polluting source.<sup>152</sup> The long river basins which pass through the mainland of Europe are outlets for thousands of sources of pollutants.<sup>153</sup> There, EEC effluent regulation at each source controls pollution more efficiently than attempts to identify upstream sources after water quality far downstream has been assessed.<sup>154</sup>

Many member states have advocated the UES approach for four reasons. First, emissions standards avoid costly monitoring systems and apportioning of permitted pollution loads among the countries.<sup>155</sup> Second, the emissions standards impose equal cost burdens on all sectors of industry wherever they are located.<sup>156</sup> Thus, all industries are

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146. *Id.*

147. *Id.* at 22.

148. *Id.*

149. *Id.*

150. *Id.* at 13.

151. *Id.* at 22.

152. *Id.* at 17.

153. *Id.* at 22.

154. *Id.*

155. KISS, *supra* note 14, at 56.

156. *Id.*

treated equally, preventing a distortion of competition.<sup>157</sup> Third, the UES approach, unlike the EQO approach, controls toxic pollutants, such as DDT, dioxin, and PCBs which cannot be removed from the water by ordinary disinfection or chemical treatment.<sup>158</sup> By monitoring the sources of pollution, the UES approach seeks to prevent toxic substances from entering the aquatic environment no matter how diluted they are. For this reason, one expert in this field strongly advocates the UES approach to reduce toxic pollution along the Rhine.<sup>159</sup> Finally, UES avoids the inherent problems in the EQO approach. These problems include the lack of scientific data to assess the environment's capacity to assimilate pollution, the synergistic effects of pollutants in combination with other normally harmless substances, the meteorological factors involved in transport and dispersion of pollutants, and the uncertainty of other seasonal climatic factors.<sup>160</sup>

However, the UES method is not without its drawbacks. The most serious drawback is that the UES approach cannot control non-point pollution, such as agricultural and street runoff.<sup>161</sup> Although this type of pollution is often significant, the UES approach completely overlooks it.<sup>162</sup>

EEC Directive 76/464<sup>163</sup> attempts to reconcile these two divergent views with a more flexible approach. Directive 76/464 "requires all discharges to water of certain listed dangerous substances to be subject to emission standards."<sup>164</sup> Subsequent "daughter" directives were issued specifying upper limit UES standards for highly dangerous pollutants (List I) which are Community-wide minimum standards.<sup>165</sup> Lower emission standards for less dangerous substances (List II)<sup>166</sup> are the responsibility of the individual member states.

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157. HAIGH, *supra* note 19, at 22.

158. Teclaff & Teclaff, *supra* note 6, at 30.

159. *Id.* at 36. See also Kiss, *supra* note 14, at 56.

160. NINTH REPORT, *supra* note 61, at 51.

161. von Moltke & Haigh, *supra* note 2, at 14.

162. *Id.*

163. O.J. EUR. COMM (No. L 129) 1 (1976), cited in HAIGH, *supra* note 19, at 70-76.

164. HAIGH, *supra* note 19, at 17.

165. List I substances include: mercury (Directive 82/176, O.J. EUR. COMM. (No. L 81) 1 (1982)); cadmium (Directive 83/513, O.J. EUR. COMM. (No. L 291) 1 (1983)); aldrin, dieldrin and endrin (Directive proposed); carbon tetrachloride, chloroform and DDT (Directive 86/280, O.J. EUR. COMM. (No. L 181) 1 (1986)); and chlordane and heptachlor (Directive 79/117, O.J. EUR. COMM. (No. L 3) 1 (1979)). See generally HAIGH, *supra* note 19.

166. List II substances include: chromium, lead, zinc, copper, nickel and arsenic. The Commission set priorities for comparing national standards for these substances. O.J. EUR. COMM. (No. C 305) 1 (1982). The Commission has also proposed a directive for quality stan-



Each member state has the option to choose either UES or EQO to regulate List II substances.<sup>167</sup>

The dispute between the two philosophies has become less antagonistic since the passage of Directive 76/464. Pursuant to EEC Directive 80/779, the United Kingdom now uses the UES approach with respect to air pollution by taking into account individual polluter's abatement costs. However, the United Kingdom ignores the different capacities of the environment to tolerate the pollution.<sup>168</sup> In 1983, the authors of the Ninth Report of the Royal Commission on Environmental Pollution took an additional step toward reconciling the dispute.<sup>169</sup> In this report, the authors stated:

If only in the interests of international co-operation, the United Kingdom must respond to the views of its European Community partners, and it should do so in a way that ensures that constructive criticism is not mistaken for obstructiveness. Foresight and prudence also suggest that the United Kingdom should reappraise its stance on irretrievable discharges to the sea of toxic substances which are unarguably persistent and bioaccumulative.<sup>170</sup>

#### D. Nationalism and Sovereignty

The problems of nationalism and sovereignty are basic to any international agreement. One author states that

[i]n this century, nationalism has never been dead, or even dying. In recent years the nationalistic goals of many nations have been invigorated . . . . In the light of increasing nationalism, it is difficult to be optimistic about the ability of the international community to cope with issues [such as transnational pollution].<sup>171</sup>

Other authors appear more hopeful. Some believe free exchange of research information, universally attended international organizations, and cooperative actions in the international community can accommodate national interests.<sup>172</sup> The exploration of this view is beyond the scope of this Comment, except for one brief note. The

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dards for chromium. O.J. EUR. COMM. (No. C 351) 1 (1985) (COM (85)737). See also HAIGH, *supra* note 19, at 77-78.

167. HAIGH, *supra* note 19, at 77-78.

168. NINTH REPORT, *supra* note 61, at 50.

169. *Id.*

170. *Id.* at 53.

171. Charney, *Introduction*, in THE NEW NATIONALISM AND THE USE OF COMMON SPACES 3 (J. Charney ed. 1982).

172. *Id.*

purpose behind the division of power in EEC Directives is that each member state retains a degree of sovereignty over management of its natural resources.<sup>173</sup> However, a solution to international pollution requires reasonableness and equity. This necessitates that member nations give up some of their sovereignty. In particular, reasonableness and equity limit a state's right to exclusive and unlimited use and disposal of international resources, such as air and water, in ways that harm neighboring states.<sup>174</sup> "The logical implication of the concept of community of interests is 'cooperation,' however controversial its meaning is in international law."<sup>175</sup>

#### IV. SUGGESTED APPROACHES TO COMBAT TRANSNATIONAL POLLUTION ON A COMMUNITY-WIDE LEVEL

No single principle will guide the Community in controlling transnational pollution.<sup>176</sup> Each of the following approaches has drawbacks, but collectively these approaches offer possibilities for a more consistent and unified approach to the problem. They require the Community to take a more active role in both implementation and enforcement.<sup>177</sup> This activist approach inherently conflicts with nationalism and sovereignty among the member states. However, it also assumes that the collective political-will exists and is strongly committed to creating a workable solution to cross-boundary pollution.<sup>178</sup> Thus, the following approaches should not be viewed in isolation; rather, they must be taken together as a flexible plan. Practicalities and compromises will be necessary when economic disparity exists among the member states.<sup>179</sup> No legislation or policy proposal of this scope can be interpreted with "draconic insensitivity."<sup>180</sup>

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173. Caponera, *Patterns of Cooperation in International Water Law: Principles and Institutions*, in *TRANSBOUNDARY RESOURCES LAW* 6 (A. Utton & L. Teclaff eds. 1987).

174. *Id.*

175. *Id.*

176. von Moltke & Haigh, *supra* note 2, at 18.

177. Vandermeersch argues that, prior to the SEA, the EEC was evolving towards more active implementation by the European Parliament. However, now, "the drafters of the SEA apparently [wish] this evolution to be halted" by restricting Community involvement to the express objectives of the EEC's environmental policy. Vandermeersch, *supra* note 30, at 425.

178. The political-will doctrine is supported by Robert McManus, even against those who argue it may be politically unrealistic and utopian. See McManus, *Legal Aspects of Land-Based Sources of Marine Pollution*, in *THE NEW NATIONALISM AND THE USE OF COMMON SPACES* 107 (J. Charney ed. 1982).

179. Krämer, *supra* note 61, at 668.

180. McManus, *supra* note 178, at 105.

### A. More Specific Substantive Legislation

The Community should pass more rigorous substantive legislation which is specifically aimed at combatting cross-boundary pollution. Consistent and unequivocal standards across political boundaries would lessen the problem of non-uniformity and would encourage the spirit of unification. Thus far, cross-boundary pollution has not been addressed adequately or consistently. For example, the directive on water pollution and control ignores transnational pollution.<sup>181</sup> Although EEC Directive 82/176<sup>182</sup> provides for interstate harmonization in monitoring compliance when more than one member state is affected, it is limited solely to mercury discharges from the chloralkali industry.<sup>183</sup> Other implementing directives do not include similar statements of harmonization.<sup>184</sup> To overcome inconsistencies, the parent directive should contain a harmonization clause.

Similarly, the regulatory mechanism for EEC Directive 84/360<sup>185</sup> on air pollution emissions from industrial plants conspicuously fails to consider the impact of "action [of individual plants] planned or taken in pursuance of the Directive, or inaction, on either side of a shared airshed frontier."<sup>186</sup> Thus, in order to foster shared responsibilities for transnational pollution among the member states, EEC directives must unambiguously address the issue of international compliance and cooperation.

### B. Monitoring Controlled Activities and Community Attendance at Coordination Meetings

Non-uniform enforcement of directives could also be reduced by a Community program that monitors member states' compliance with EEC standards. Currently, monitoring is only mandated when a pollution incident occurs. Furthermore, monitoring is limited to the time needed to resolve the incident.<sup>187</sup> For example, EEC Directive 78/176 involves control of waste from the titanium dioxide industry

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181. EEC Directive 76/464, O.J. EUR. COMM. (No. L 129) 1 (1976), *cited in* HAIGH, *supra* note 19, at 70.

182. O.J. EUR. COMM. (No. L 81) 1 (1982), *cited in* HAIGH, *supra* note 19, at 85.

183. *Id.*

184. HAIGH, *supra* note 19, at 87.

185. O.J. EUR. COMM. (No. L 188) art. 10 (1984), *cited in* Burchi, *Shared Natural Resources in the European Economic Community Legislation*, in *TRANSBOUNDARY RESOURCES LAW* 82, 85 (A. Utton & L. Teclaff eds. 1987).

186. *Id.* See also HAIGH, *supra* note 19, at 224-27.

187. Burchi, *supra* note 185, at 82.

through prevention and progressive reduction.<sup>188</sup> The Directive requires monitoring and remedial operations in response to accidents or non-compliance, but fails to require "interstate consultation between states when the licensing of controlled waste disposal activities are first established."<sup>189</sup> More than mere ad hoc monitoring of controlled activities is needed. According to one commentator, the EEC needs mechanisms for cooperation and consultation between member states for several purposes, including mechanisms

(1) to adjust the substantive provisions of a Directive to the peculiar requirements of shared natural resources; (2) to monitor effectively the state of shared natural resources, and compliance with substantive Directive provisions affecting them; and (3) to take necessary, effective action to remedy transboundary pollution incidents, whatever the cause.<sup>190</sup>

EEC directives rarely require interstate consultation in the establishment of effluent or air quality standards by the individual member states where shared natural resources are involved.<sup>191</sup> Thus, these directives "fail to consider the potential transboundary impact of action planned or taken in pursuance of the Directive, or inaction, on either side of [for example] a shared airshed frontier."<sup>192</sup> Every EEC environmental directive should require consultations for setting all standards, as well as for monitoring media conditions and remedial operations in response to transnational release of pollutants.<sup>193</sup> The purpose of such consultations would be to assess the foreseeable costs

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188. O.J. EUR. COMM. (No. L 54) at 21, art. 7(2) (1978).

189. *Id.*

190. Burchi, *supra* note 185, at 84.

191. *Id.* at 85.

192. *Id.*

193. Burchi contends that

[c]ommunity involvement is not called for in the cooperation and coordination of monitoring and remedial operations. This dichotomy has no apparent compelling justification; the consultation, cooperation, and coordination mechanisms envisaged may all equally benefit from the catalytic role the Community can play through its Commission.

*Id.* at 87.

EEC Directive 80/779, which attempts to control air pollution caused by sulfur dioxide and suspended particulates, is the only directive that now requires consultations. Member states are required to establish monitoring stations so that they may supply data necessary to fix values outlined by the directive. O.J. EUR. COMM. (No. L 229) 1 (1980), *cited in* HAIGH, *supra* note 19, at 183. Through this directive, "[o]nce a year Member States must inform the Commission of instances when limit values have been exceeded, together with the reasons and the measures which have been taken to avoid recurrences. Each year the Commission must publish a summary report of the application of the Directive." HAIGH, *supra* note 19, at 182.

and benefits of the shared resource regulation to result in a stronger concerted action on both sides of the border.<sup>194</sup> Such monitoring will also ensure cooperation among member states who share an aquatic and/or atmospheric environment because each will be given an opportunity to participate in formulating regulation policies.<sup>195</sup>

The EEC should attend all coordination and monitoring consultations. Presently, the EEC Commission may decline to attend these consultations.<sup>196</sup> Additionally, Commission coordination of monitoring and remedial operations is not required in any of the directives before a pollution incident occurs.<sup>197</sup> A mandatory attendance plan would: (1) ensure that directives are being implemented uniformly, thereby reducing distortions of trade;<sup>198</sup> (2) effectively monitor compliance with substantive provisions in the directive; (3) ensure that effective action is being taken to reduce and remedy transnational pollution events.<sup>199</sup> This last step is especially important when pollution threatens member states which are not directly represented in the consultation meeting. The Commission, therefore, would act as a vicarious representative for the absent member states. Thus, the active and participating presence of the Commission can provide the impetus for a more uniform implementation of Community directives.

### C. Source Reduction

In 1973, the First Action Programme stated that pollution prevention should be encouraged.<sup>200</sup> Since then, all the subsequent action programs have stressed prevention. For example, the SEA states: "[a]ction by the Community relating to the environment shall be based on the principles that preventive action should be taken [and] that environmental damage should as a priority be rectified at [the] source."<sup>201</sup> Therefore, source reduction in the form of waste minimi-

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194. Burchi, *supra* note 185, at 81.

195. *Id.* at 82.

196. See O.J. EUR. COMM. (No. L 229) 1 (1980).

197. Burchi, *supra* note 185, at 82.

198. If necessary, the Commission can make substantive adjustments within the directive to allow for the peculiar requirements of particular shared natural resources.

199. HAIGH, *supra* note 19, at 86.

200. *Id.* at 11.

201. SEA Article 130r(2). See *supra* note 85. The prevention principle was incorporated into a policy called "vorsorgeprinzip" by the German Council of Environmental Experts in 1976 in reference to pollution problems of the North Sea. Vorsorgeprinzip embraces precautionary environmental policies which go beyond mere clean up of imminent hazards and elimination of damage which has already occurred. It further stresses natural resource protection

zation should be a goal that is best pursued at the Community level rather than at the member state level.

The most promising approach to source reduction is waste minimization.<sup>202</sup> Waste minimization is distinct from other pollution control approaches because it looks at the technical processes within the industry itself, rather than at the amount of effluent discharged from the end of the industrial process.<sup>203</sup>

Waste minimization differs from traditional pollution controls in four fundamental ways.<sup>204</sup> First, it prevents the production of hazardous wastes rather than treating wastes already created.<sup>205</sup> This makes a plant more competitive because it will expend less capital on end-of-pipe pollution control. Thus, waste minimization will further the policy of making the "most economic use possible of the natural resources offered by the environment."<sup>206</sup> This is an effective means

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and conservation along with balancing environmental benefits against economic costs. von Moltke & Haigh, *supra* note 2, at 16.

202. The U.S. Environmental Protection Agency has defined waste minimization as an umbrella term for a variety of different waste treatments including

the reduction, to the extent feasible, of hazardous waste that is generated or subsequently treated, stored, or disposed of. It includes any source reduction or recycling activity undertaken by a generator that results in either (1) the reduction of total volume or quantity of hazardous waste or (2) the reduction of toxicity of hazardous waste, or both, so long as such reduction is consistent with the goal of minimizing present and future threats to human health and the environment.

U.S. ENVTL. PROTECTION AGENCY, REPORT TO CONGRESS: MINIMIZATION OF HAZARDOUS WASTE, EPA/530-SW-033, at ii (Washington, DC: EPA, Office of Solid Waste and Emergency Response, Oct. 1986). Waste minimization has recently been established as EPA's primary agency-wide goal for all control programs. This aggressive new policy is intended to be stressed in "every feasible aspect of agency decision-making and planning." *EPA Points to Long-Term Shift in Priorities, with Emphasis on Source Reduction*, INSIDE EPA, Sept. 16, 1988, at 12.

It should be noted that the term "source reduction" is not synonymous with the term "waste minimization." "Source reduction" or "waste reduction" is defined as a reduction of the generation of hazardous waste in order to "avoid handling, treatment, or disposal." U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, FROM POLLUTION TO PREVENTION: A PROGRESS REPORT ON WASTE REDUCTION—SPECIAL REPORT, OTA-ITE-347, at 1 (Washington, DC: U.S. Government Printing Office, June 1987) [hereinafter PROGRESS REPORT].

203. PROGRESS REPORT, *supra* note 202, at 1.

204. Underwood, *Cutting Chemical Wastes at Source: The U.S. Experience*, 2 EUR. ENV'T REV., July 1988, at 2.

205. *Id.*

206. Fourth Action Programme, O.J. EUR. COMM. (No. C 70) at 4 (1987). The Fourth Action Programme emphasizes the positive economic impact of stricter environmental controls.

Whether or not it is easy for a particular industry to respond to the demand for stricter environmental standards, the Commission is convinced that, overall, the competitiveness of Community industry on world markets in the 1990's will depend partly on its products reaching environmental standards at least as high as those of

of improving industrial efficiency and growth.<sup>207</sup>

Second, in preventing the production of wastes, waste minimization provides a safer work environment by reducing the risk of toxic exposure to workers.<sup>208</sup> Thus, worker's health is safeguarded. Third, waste minimization eliminates the need for additional chemical or engineering technologies to capture, contain or treat wastes.<sup>209</sup> A substantial savings can be realized through a reduction of pollution control facilities, engineering, operating costs and manufacturing costs.<sup>210</sup> In some cases, industry could retain "sales of products that might have been taken off the market as environmentally unacceptable."<sup>211</sup>

Finally, waste minimization requires a commitment to change from the "top down" in the corporate structure rather than delegation to a pollution control engineer whose expertise is limited to handling wastes already produced.<sup>212</sup> With this "top down" commitment, industry can reduce waste along the entire production process. "A few people with end-of-pipe pollution control jobs are not in a position to reduce waste; such efforts must involve upstream workers and facilities."<sup>213</sup> The Fourth Action Programme is optimistic that clean technology will ultimately create new jobs and be a boost for small businesses.<sup>214</sup>

Although source reduction has been "hailed in theory," it has

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competitors. If such progress is not made, then Community producers will lose market share not only on international markets, but also on the internal market. Moreover it needs to be recognized that pollution represents a waste of resources and is often linked with obsolete technologies. On both these counts the imposition of ambitious environmental standards in the remainder of the 1980s, which stimulate technological innovation in order to meet them, will protect markets and jobs in the long-term. These developing standards will be real challenges for industry; but will offer real opportunities as well.

*Id.* at 12, ¶ 2.3.13.

207. U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, *SERIOUS REDUCTION OF HAZARDOUS WASTE: SUMMARY*, OTA-ITE-318, at 14 (Washington, D.C.: U.S. Government Printing Office, Sept. 1986) [hereinafter OTA].

208. *Id.*

209. *Id.*

210. *Id.*

211. *Id.*

212. "Waste reduction succeeds when it is part of the everyday consciousness of all workers and managers involved with production—where the waste reduction opportunities are—rather than when it is a job only of those responsible for complying with environmental regulations." *Id.* at 10.

213. *Id.*

214. O.J. EUR. COMM. (No. C 70) at 8, 15, ¶¶ 1.6 & 2.4.6; *Research Notes*, 1 EUR. ENV'T REV., Sept. 1987, at 39.

been "largely ignored in practice."<sup>215</sup> One reason for this discrepancy may be that cost-benefit assessments are difficult to establish.<sup>216</sup> For example, in complex production processes, waste reduction audits, aimed at determining where waste can be eliminated, may be costly because source reduction is difficult to document with meaningful data.<sup>217</sup> These are the costs of gaining information about the type of wastes that are produced as well as developing methods for waste reduction. Testing to assess the technical and economic feasibility of waste reduction is also a costly process that has uncertain guarantees of return. Capital investment may be required, especially for complex waste minimization projects. Training employees in the new processes and restructuring the management and accounting of costs can lead to further expenses.<sup>218</sup>

Another drawback is that the benefits of source reduction are often indirect.<sup>219</sup> Benefits can be uncertain because typical accounting systems used today are geared toward analyzing traditional end-of-pipe waste management costs.<sup>220</sup> Quantitative generalizations regarding source reduction are difficult to formulate because accounting systems generally do not impose source reduction costs on specific waste generating activities. Rather, accounting systems place costs on the production process as a whole.<sup>221</sup> Such accounting systems can actually be biased against waste reduction.<sup>222</sup> The benefits of source reduction can also be obscured because the amount of liability for non-compliance that would be avoided if a source reduction project were implemented is often difficult to assess. Long-term cleanup costs for contaminated sites and future costs for victim compensation or regulatory non-compliance would be difficult or impossible to estimate.<sup>223</sup> Industries may be reluctant to factor these long-term costs into their accounting systems. Nevertheless, the Fourth Action Programme has set high priority on programs such as pollution prevention that promise both long-term and immediate gains.<sup>224</sup>

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215. Underwood, *supra* note 204, at 3.

216. OTA, *supra* note 207, at 32.

217. *Id.*

218. *Id.*

219. *Id.* at 48.

220. *Id.*

221. *Id.*

222. *Id.* at 47.

223. *Id.*

224. The Fourth Action Programme states that

[e]ven if the economic benefits to be derived from environmental measures can only



Perhaps the most difficult barrier to overcome in the promotion and implementation of source reduction measures is behavioral. The Office of Technology Assessment ("OTA") states that "how people and organizations perceive the need for waste reduction, how they evaluate a full range of methods for its implementation, how they make a decision to proceed, and how they are rewarded" is of paramount importance.<sup>225</sup> Pollution control seems to be more attractive to industry than source reduction because of the widespread belief that pollution control is easier and more practical to apply.<sup>226</sup> Furthermore, the OTA states that most people view waste minimization as an alternative to pollution control rather than as the first step in a comprehensive long-term pollution prevention and control program.<sup>227</sup>

Research and education could overcome barriers such as the uncertainties of costs and benefits and industrial reluctance to impose source reduction measures.<sup>228</sup> The EEC should focus on increased technical assistance, research, education and financial assistance from areas such as grants and subsidies. Awards and recognition such as the United Kingdom's Better Environment Awards for Industry<sup>229</sup> are an important step toward encouraging source reduction. This award program publishes booklets that illustrate successful clean technologies that can be used inexpensively by both large and small industries. For example, one award was given for the use of "waste" silage liquor to feed cattle. As a result, hazardous effluent was eliminated and feed costs were reduced.<sup>230</sup> Thus, source reduction should be an essential Community-wide objective.

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be achieved in the longer term, there may still be sound environmental and economic reasons why the necessary investments should be undertaken. OECD has concluded that "the benefits generated by environmental measures (including the damage costs avoided) have generally been greater than their costs."

O.J. EUR. COMM. (No. C 70) at 15, ¶ 2.4.4 (1987). OECD is the Organization for Economic Cooperation and Development. It publishes, among other things, reports on the connection between technological innovation and environmental protection. PROGRESS REPORT, *supra* note 202, at 12.

225. OTA, *supra* note 207, at 55.

226. *Id.*

227. *Id.* at 56.

228. See Kromarek, *supra* note 16, at 11; O.J. EUR. COMM. (No. L 169) at 11-12, art. 130r(3) (1987).

229. ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION, TWELFTH REPORT: BEST PRACTICABLE ENVIRONMENTAL OPTION 15 (Feb. 1988) [hereinafter TWELFTH REPORT].

230. *Id.*

### D. Cross-media Approach

The Fourth Action Programme advocates a cross-media approach to pollution control. This approach involves consideration of all environmental receptors—air, water and soil—as a single unit rather than separately.<sup>231</sup> It recognizes that isolated control of one media will result in degradation of another.<sup>232</sup> By using this approach, ideological differences could be decreased because cross-media analysis aims at protecting receptors from exposure to all substances regardless of the source. This approach alleviates the problem of controlling pollution from non-point sources, such as agricultural and surface runoff in a UES jurisdiction, because impact to the ambient environmental media is monitored along with discharge of pollutants generated from a single point source.<sup>233</sup>

A paradox arises because environmental regulation of one media, such as air, may cause increased pollution in another media, such as water.<sup>234</sup> For example, treatment of solid wastes may often involve evaporation ponds and air stripping columns.<sup>235</sup> As a result, volatile toxic fumes are dispersed into the air, creating a new and separate pollution problem.<sup>236</sup> Similarly, a member state could inadequately treat and dispose of industrial sewage sludge on land and, after runoff, cause heavy metal pollution in the North Sea.<sup>237</sup> Hence, an approach which does not separate water pollution from air and soil pollution is necessary. Moreover, such an approach must recognize that pollutants move between environmental media.

As in implementing source reduction, research and information is required to successfully implement a cross-media approach. Not enough is known about how pollution transfers between media.<sup>238</sup> For example, the United Kingdom claims that too little is known

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231. O.J. EUR. COMM. (No. C 70), at 4 (1987); von Moltke & Haigh, *supra* note 2, at 16.

232. See *supra* note 231.

233. Britain established a cross-media approach in 1976 called "best practicable environmental option." A single inspectorate was established to monitor controls over discharges into air, water, and land. "Where choices exist as to the sector of the environment to which wastes should be discharged [the unified inspectorate] would be instrumental in deciding how different sectors should be used to minimize environmental damage overall." TWELFTH REPORT, *supra* note 229, at 15. See also HAIGH, *supra* note 19, at 20.

234. Teclaff & Teclaff, *International Control of Cross-Media Pollution—An Ecosystem Approach*, in TRANSBOUNDARY RESOURCES LAW 289, 292-94 (A. Utton and L. Teclaff eds. 1987).

235. OTA, *supra* note 207, at 28.

236. *Id.*

237. von Moltke & Haigh, *supra* note 2, at 17.

238. Vandermeersch, *supra* note 30, at 420.

about acid rain to explain how it causes degradation of forests hundreds of miles away from the alleged source.<sup>239</sup> Until uncontrovertible scientific evidence is discovered, the United Kingdom asserts that the pollutants responsible for the damage cannot be determined.<sup>240</sup> Lack of information also impedes the development of a comprehensive policy of control. Scientific research is necessary not only to determine responsibility for pollution damage but also to devise more efficient and effective methods of pollution control.<sup>241</sup> The difficulty lies not in the concept—which is unassailable—but in collecting scientific information and in developing administrative strategies able to handle the information to control all the different sources comprehensively.<sup>242</sup>

The EEC could establish an ongoing policy of research, education and planning, such as a three year plan, to ensure that a cross-media approach is considered in all member states' legislation. For example, a member state could justify a strategy to dump sewage sludge in the sea by demonstrating that other alternative disposal routes, such as incineration or disposal on land, are either economically or technically less feasible.<sup>243</sup> A workable approach would also include a Community-wide unified enforcement and monitoring committee to oversee the effects of control on different environmental media.

An institutional framework such as the one described above is necessary to effectively handle the menace of transboundary pollution by all sources of contamination across a wide area. For example, EEC Directive 76/464<sup>244</sup> purports to control toxic substances deposited into surface waters. However, it ignores the impact of those same substances released into groundwaters from such sources as landfills or agriculture that eventually find their way into surface waters of rivers or oceans. A more effective approach would be to develop a directive that requires control of toxic substances in whatever media they are found.<sup>245</sup> A monitoring system aimed at controlling the tar-

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239. *Id.*

240. *Id.*

241. Teclaff & Teclaff, *supra* note 234, at 302-03.

242. von Moltke & Haigh, *supra* note 2, at 17.

243. The concept of alternative options for disposal are discussed in detail in TWELFTH REPORT, *supra* note 229, at 17.

244. O.J. EUR. COMM. (No. L 129) 1 (1976), *cited in* HAIGH, *supra* note 19, at 70.

245. Two commentators argue that the EEC has dealt with pollution from runoff and groundwater sources only as an afterthought. They advocate a requirement that tributary

get pollutant in a variety of media should be included in the proposed directive.

Ultimately, due to the interdependence that characterizes the physical and biological elements of the environment, international control of cross-media necessarily leads to an ecosystem approach. The term "ecosystem" is defined as "the functional unit that includes both biotic (living) and abiotic (nonliving) elements."<sup>246</sup> The ecosystem approach is necessary to combat the complex problem of trans-frontier pollution. This can only be done by considering all elements of the environment, not just the impact of pollutants upon various media. Attempts have been made to integrate environmental protection activities. Notably, in 1984, the EEC considered arguments from the European Parliament to "combine into a single and effective central convention all the international conventions, EEC Directives, and national laws for protecting the North Sea."<sup>247</sup> Such efforts to assemble controls into a Community-wide policy should be encouraged.

## V. CONCLUSION

There is neither a simple nor a completely effective solution to the problem of transnational pollution in Europe. The intent of this Comment is to investigate possible guiding principles from which substantive Community law could be negotiated. The EEC needs to re-evaluate its environmental protection policies in light of the growing evidence that a more unified approach across national boundaries is necessary to avoid further degradation of the environment. Certain areas of environmental policy, such as air and water pollution control, are crucial to maintain a clean environment throughout the Community and such policies should be implemented by strong substantive measures at the Community level rather than at the member-state level. These guiding concepts may be used to establish a more unified approach to transnational pollution control.

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basins be part of the media subject to control especially where pollutants could reach the mainstem of rivers such as the Rhine. Teclaff & Teclaff, *supra* note 6, at 35.

246. P. EHRLICH, A. EHRLICH & J. HOLDREN, *ECOSCIENCE: POPULATION, RESOURCES, ENVIRONMENT* 97 (1977), *quoted in* Teclaff & Teclaff, *supra* note 234, at 289.

247. Teclaff & Teclaff, *supra* note 234, at 296. For text of the resolution by the European Parliament, see O.J. EUR. COMM. (No. C 46) at 135 (1984).

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