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## Federalism and Environmental Quality: A Case Study of Packaging Waste Rules in the European Union

Carole Stuart Comer\*

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# FEDERALISM AND ENVIRONMENTAL QUALITY: A CASE STUDY OF PACKAGING WASTE RULES IN THE EUROPEAN UNION

CAROL S. COMER\*

## INTRODUCTION

In December of 1994, the European Union ("E.U.") enacted a Directive establishing standards for recovering and recycling packaging waste.<sup>1</sup> Member States will soon have to pass national legislation "harmonizing" their existing national laws with this Directive.<sup>2</sup> Some of these States, including Germany, France, and The Netherlands, already have national packaging waste laws. But those laws establish target rates for recovering and recycling packaging waste well above the Community-wide standards adopted in the new E.U. Directive. The German government, in particular, has complained that compliance with the Directive will compromise national environmental quality by imposing lower standards.<sup>3</sup>

This complaint has become a familiar one in recent years.<sup>4</sup> Just two years ago, American environmentalists, among others, voiced a similar refrain when the Senate approved the North American Free Trade Agreement ("NAFTA") with Mexico.<sup>5</sup> The new trade re-

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\* J.D. Candidate, 1996, Indiana School of Law at Indianapolis. The author is also a graduate student at the Indiana University School of Public and Environmental Affairs. She would like to thank Daniel H. Cole for his invaluable advice and commentary and Mary and Stephen Comer for infinite patience throughout the preparation of this Note.

1. Council Directive No. 94/62/EC of December 20, 1994, published in the Official Journal of the European Communities on December 20, 1994 at O.J. L 365/10, 12-31-94.

2. For information on harmonization requirements and procedures, *see infra* part II.B.

3. *See id.*

4. *See id.*

5. *See, e.g.,* Patti A. Goldman, *Resolving the Trade and Environment Debate: In Search of a Neutral Forum and Neutral Principles*, 49 WASH. & LEE L. REV. 1279, 1281-82 (1992).

gime, they argued, could be used to force the United States to reduce its environmental standards.<sup>6</sup> Increasingly, international environmental laws and international trade regimes have limited the power of participating governments to set stringent standards for environmental protection; in doing so, they have limited sovereign discretion to select a level of national environmental quality.<sup>7</sup> But there is another side to this issue, which has received little attention.

National environmental policies can impact on environmental quality far beyond national borders. Particularly stringent environmental standards in one country can result in the export of pollution problems to others.<sup>8</sup> This raises a fairness issue. Specifically, can one country justifiably seek to improve environmental quality at the expense of another?

This is the question at the heart of the debate over the waste packaging regulation in the E.U. Germany's Waste Packaging Ordinance has reduced the amount of waste transported to German landfills and, thereby, contributed to improved environmental quality in Germany.<sup>9</sup> At the same time, the economic incentives created by the German Packaging Waste Ordinance have resulted in mass exports of German waste to other E.U. Member Countries and non-member countries in Central and Eastern Europe.<sup>10</sup> But now, the E.U.'s new Waste Packaging Directive may require Germany and other countries to relax their targets for waste recovery and recycling.<sup>11</sup> This may result in some negative environmental impact in Germany—although there is even reason to doubt this. More importantly, it will contribute to improved environmental quality throughout the Union and beyond its borders in the countries of Central and Eastern Europe by reducing the incentive German companies have under currently stringent national standards to export their waste.

Section I of this Note provides a theoretical framework for feder-

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6. See *id.* at 1292-94.

7. See *id.* at 1290-94.

8. See *id.* at 1292.

9. See *infra* part IV.

10. See *infra* part IV.

11. See *infra* part IV.

alism in environmental protection and presents the American federal experience with environmental standards. Section II explicates the quasi-federal structure of the E.U., based on the principles of subsidiarity, proportionality, and harmonization. Section III supplies a brief history of environmental legislation in the Union. That history demonstrates how previous E.U. directives have contributed to improved Union-wide environmental quality, despite the fact that, in some cases, they imposed upside limits on national environmental standards. Section IV contains the case study of the E.U.'s new Waste Packaging Directive, focusing on its relation to existing national legislation in Germany, France, and The Netherlands. Finally, Section V draws implications from the analysis, and concludes that regional environmental standards requiring Member States to relax national standards may, at least in some cases, be both justified and necessary to prevent the export of environmental problems. They can result—and have resulted—in improved environmental quality on the regional level.

#### I. FEDERALISM AND THE ENVIRONMENT: A THEORETICAL FRAMEWORK

Environmental protection and pollution control were originally believed to be local issues.<sup>12</sup> It was thought that pollution was best addressed where it was generated.<sup>13</sup> Pollution carried away by wind or water, however, left the generating state little incentive to control the damage.<sup>14</sup> Consequently, some states were lax in their regulatory efforts.<sup>15</sup>

Environmental pollution does not recognize political borders; a state can suffer from pollution generated by its neighbors. Governments that choose to adopt strict regulations can see their efforts minimized by nearby nations with low standards or poor enforcement.<sup>16</sup> Without regional standards, the quality of the environment in a progressive state or country can be degraded by political enti-

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12. See ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY 103 (Robert Percival *et al.*, eds., 1992).

13. See *id.* at 73-77.

14. See *id.*

15. See *id.* at 103.

16. See *id.* at 116-26. See also Goldman, *supra* note 5, at 1292.

ties with little or no commitment to the environment.<sup>17</sup> This is evidenced by the American federal experience with pollution control.

The earliest federal environmental programs in the United States were based upon the premise that environmental issues were a local responsibility.<sup>18</sup> The federal environmental laws in the 1960s, which were the precursors to the current comprehensive laws, remained primarily non-regulatory.<sup>19</sup> However, the federal role in environmental policy changed dramatically in the 1970s, as expanding economic activity revealed the interstate character of pollution.<sup>20</sup>

The federalization of environmental policy resulted from recognition that state and local governments lacked the resources and the political will to control pollution problems that were becoming national in scope.<sup>21</sup> The start of the modern federalization of environmental law began symbolically with the first Earth Day on April 22, 1970. In that year, the Clean Air Act was adopted and, soon after, a rapid succession of major pollution control laws.<sup>22</sup>

The growth of modern environmental regulations has been largely driven by federal legislation. Although the environment is an area in which the federal government shares competency with the states, the Congress clearly has the power to preempt state law in environmental policy, though states maintain power to address environmental issues.<sup>23</sup> Most federal environmental laws are implemented and enforced at the state level.<sup>24</sup> Federal legislation often specifies minimum standards that must be met, but allows the establishment of more stringent pollution control measures by the states.<sup>25</sup> States also maintain the primary authority to regulate environmental problems that are still considered local issues.<sup>26</sup>

The federalization of environmental policy in the United States,

17. *See id.* at 118.

18. *See id.* at 104-20.

19. *See id.* at 104-06.

20. *See id.* at 106-12.

21. *See id.* at 106.

22. *Id.* at 109-10.

23. *Id.* at 113, 116-17.

24. *Id.* at 117.

25. *Id.* at 118.

26. *See id.* at 117.

especially the air pollution control legislation, has been a success.<sup>27</sup> Emissions of most air pollutants have fallen in the decades since the Clean Air Act was adopted in 1970. The *Statistical Record of the Environment* reported the decrease in emissions levels from the years 1940 to 1987. Emission data are shown in Table 1 below.<sup>28</sup>

Table 1  
Air Pollution Emissions 1940-1987

|     | 1940 | 1950 | 1960 | 1970  | 1975  | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|-----|------|------|------|-------|-------|------|------|------|------|------|------|------|------|
| PM  | 23.1 | 24.9 | 21.6 | 18.5  | 10.6  | 8.5  | 8.0  | 7.1  | 7.1  | 7.4  | 7.0  | 6.8  | 7.0  |
| SOx | 17.6 | 19.8 | 19.7 | 28.3  | 25.8  | 23.4 | 22.6 | 21.4 | 20.7 | 21.5 | 21.1 | 20.7 | 20.4 |
| NOx | 6.8  | 9.3  | 12.8 | 18.3  | 19.2  | 20.4 | 20.4 | 19.6 | 19.0 | 19.7 | 19.8 | 19.3 | 19.5 |
| VOC | 18.1 | 20.2 | 22.6 | 26.2  | 22.1  | 22.3 | 21.0 | 19.7 | 20.4 | 21.5 | 20.1 | 19.3 | 19.6 |
| CO  | 81.5 | 86.1 | 88.1 | 100.2 | 82.2  | 77.0 | 74.4 | 69.4 | 71.3 | 68.7 | 64.6 | 61.6 | 61.4 |
| Pb  | (NA) | (NA) | (NA) | 203.8 | 147.0 | 70.6 | 55.9 | 54.4 | 46.3 | 40.1 | 21.1 | 8.6  | 8.1  |

Measurements in millions of metric tons, except lead measured in thousands of metric tons.

PM=particulate matter, SOx=sulfur oxides, NOx=nitrous oxides, VOC=volatile organic compounds, CO=carbon monoxide, Pb=lead.

Air quality in the United States has also improved. For the years 1979 through 1988, lead concentrations in the air fell by 89 percent, carbon monoxide levels declined by 28 percent, and sulfur dioxide levels fell by about 30 percent. Tangible improvements were also seen in the levels of particulate matter in the air and nitrogen dioxide.<sup>29</sup>

These improvements in air quality are particularly impressive considering the growth of the U.S. population and economy over the same period of time. Between 1970 and 1990, the U.S. population grew by approximately 25 percent, and economic activity nearly doubled.<sup>30</sup>

Although not as dramatic as the air quality improvements, water quality has also shown improvement since the Clean Water Act was adopted.<sup>31</sup> Some lakes have shown a continued decline in quality,

27. *Id.*

28. STATISTICAL RECORD OF THE ENVIRONMENT 59 tbl. 66 (Arsen J. Darnay, ed., 1992). Particulate levels fell about 21% and nitrogen dioxide levels fell by 12%.

29. *Id.* at 1, tbl. 1.

30. ENVIRONMENTAL POLICY IN THE 1990S 20 (Norman J. Vig & Michael E. Kraft, eds., 1994). Economic activity is estimated adjusted for inflation.

31. *Id.* at 21.

but most lakes, rivers, and streams have maintained their quality in spite of great economic growth.<sup>32</sup> Many water bodies have shown improvement, and a few have been remarkably restored.<sup>33</sup>

One source even supports the proposition that water quality is generally being maintained or is even improving.<sup>34</sup> Table 2 lists the type of water body and its change in condition in the decade between 1972 and 1982.<sup>35</sup>

**Table 2**  
**Changes in Surface Water Quality in the United States, 1972 to 1982**

| Water Quality Status | River & Streams<br>(1000s of miles) | Lakes<br>(millions of acres) | Estuaries<br>(1000s of sq. miles) |
|----------------------|-------------------------------------|------------------------------|-----------------------------------|
| Maintained           | 296.00                              | 10.13                        | 12.80                             |
| Improved             | 47.00                               | 0.39                         | 3.80                              |
| Degraded             | 11.00                               | 1.65                         | 0.56                              |
| Unknown              | 90.00                               | 4.15                         | 0.17                              |

The federal system of environmental laws in the U.S. has successfully addressed problems that state governments were unable to adequately control. Improvements in the quality of the local environment have been realized since the federal government preempted the states' power to exclusively control their own environmental policies. Although some may state that the federalization of the American environmental laws may be viewed as an encroachment upon the sovereign powers of the states,<sup>36</sup> the result has been a cleaner and healthier environment for the states,<sup>37</sup> because federal environmental laws have never forced states to reduce existing standards, and they have only rarely prohibited states from enacting more stringent standards.<sup>38</sup> Thus, improved environmental quality

32. *Id.*

33. *Id.*

34. *Id.*

35. THE WATER ENCYCLOPEDIA 499 tbl. 7-6 (Frits van der Leeden *et al.*, eds., 1990).

36. See generally ENVIRONMENTAL POLICIES IN THE 1990S, *supra* note 30.

37. This is not to imply that federal environmental laws in the U.S. have solved all environmental problems. Some issues remain inadequately addressed, e.g., toxic air and water pollutants. *Id.* at 21.

38. One example of federal legislation that prohibited states from enacting more stringent standards than the federal standards was the Clean Air Act before

in the United States rarely came at the expense of local and state authority.

## II. THE STRUCTURE OF THE EUROPEAN UNION

The European Union is an important regime in the study of trade and the environment. The area is densely populated, heavily polluted, and highly industrialized. The economic tie binding its diverse Member Countries prompted the development of an environmental agenda.<sup>39</sup> Conversely, the emergence of a common environmental policy has contributed to the growth of the European Union as a political system.<sup>40</sup>

### A. *The History and Structure of the European Union*

The European Union has its beginnings as an economic customs union.<sup>41</sup> In the early 1950s, politicians sought to rebuild the European prosperity torn by war and to encourage future peace by building an area of common trade.<sup>42</sup> Although rooted in the European Coal and Steel Community of 1951 and the 1957 European Atomic Energy Community, it began formally with the creation of

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the 1990 amendments. That Act preempted more stringent state vehicle emissions standards except for the standards already existing in California which were stricter than the federal standards promulgated in the 1970 Clean Air Act. The 1990 Amendments, however, authorized other states to adopt the California standards. ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY, *supra* note 12, at 844.

39. The first explicit references to Community powers in the field of environmental protection came on July 1, 1987, when the SEA amending the Treaties went into force. "Article 100a [a]d[down] criteria for environmental protection legislation affecting the internal market and allow[ed] legislation to be adopted by qualified majority in the Council. Articles 130r, 130s, and 130t [a]d[down] the goals, means and procedures for the adoption of legislation regarding the environment, but by unanimous decision." 2 COMMISSION OF THE EUROPEAN COMMUNITIES, DIRECTORATE-GENERAL XI, EUROPEAN COMMUNITY ENVIRONMENT LEGISLATION, xii (Office for Official Publications of the European Communities, 1992).

40. *Id.* at xi.

41. See 1951 Treaty Establishing the European Coal and Steel Community and the 1957 Treaty Establishing the European Atomic Energy Community. *Id.* at xi n.1.

42. See *id.* at xii.



the European Economic Community in the 1957 Treaty of Rome ("Treaty").<sup>43</sup>

The six original signatory nations, Belgium, France, Italy, Luxembourg, The Netherlands, and the Federal Republic of Germany, joined together on January 1, 1958 to form the European Economic Community. Denmark, the United Kingdom, and Ireland joined in 1973, and Greece, Spain, and Portugal were admitted in the 1980s.<sup>44</sup> Austria, Finland, and Sweden were recently admitted and became members on January 1, 1995, bringing the present total to fifteen Member States in the European Union.<sup>45</sup>

The purpose of the Treaty was to create a common economic market by facilitating the free circulation of goods, services, persons, and capital.<sup>46</sup> The Treaty was later amended by the Single European Act in 1987 and the Treaty on Political Union signed in Maastricht in 1991.<sup>47</sup> In 1975, the European Parliament resolved to use the term "European Community" to refer to the supranational political entity that had emerged, acknowledging the broader range of issues the Community would address.<sup>48</sup> The reference to the European Union resulted from the Maastricht Treaty reflecting the goal of a single union without national borders.<sup>49</sup>

From its beginnings as a purely economic customs union, it has evolved into a community with legal and political dimensions. Although the European Union is not a "United States of Europe," it is a quasi-federal system with the Community and Member States having dual power.<sup>50</sup> Areas of exclusive competency are constitu-

43. The Treaty Establishing the European Economic Community [hereinafter "Treaty of Rome"] along with the 1951 Treaty Establishing the European Coal and Steel Community and the 1957 Treaty Establishing the European Atomic Energy Community constitute the European Community. EUROPEAN COMMUNITY ENVIRONMENT LEGISLATION, *supra* note 39, at xi n.1.

44. *Id.* at xi.

45. *Council Agrees on PCB Phase Out, Packaging Recycling, Hazardous Waste List*, 18 Env't Rep. (BNA) No. 1, at 4-5 (Jan. 11, 1995).

46. ECKARD REHBINDER & RICHARD STEWART, ENVIRONMENTAL PROTECTION POLICY 15 (1985).

47. EUROPEAN COMMUNITY ENVIRONMENT LEGISLATION, *supra* note 39, at xii, xiii.

48. *Id.* at xi n.2.

49. Paul D. Marquardt, *Subsidiarity and Sovereignty in the European Union*, 18 FORDHAM INT'L L.J. 616, 616 n.1 (1994).

50. Some E.U. citizens object that the Union is not a true federal system, as it

tionally delegated to the Union and some areas are reserved to the States.<sup>51</sup> The power to legislate most issues, however, is shared between the E.C. and the Member States. In the areas of shared competency, action may be taken at both the Community and national level.<sup>52</sup> All States have agreed upon the supremacy of Community law. Therefore, when the Community acts it preempts legislation at the State level.<sup>53</sup>

The Community has three branches, an executive, a legislative, and a judiciary branch.<sup>54</sup> The Commission of the European Communities is the executive branch with the power to propose legislation.<sup>55</sup> It is organized into 23 directorates-general, including the Directorate-General XI which covers the environment, nuclear safety, and civil protection.<sup>56</sup> The Commission is also responsible for the implementation and enforcement of Community environmental legislation.<sup>57</sup> The Council of Ministers is the legislative branch of the Community with the primary power to adopt legislation. The Council is comprised of one governmental representative

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exists in Germany or the United States. Among other things, they note, the European Union can sign, but cannot make treaties binding on its members. Also, its directives are not directly binding on Member States, but require nationally enacted implementing legislation. At the same time, it is clear that E.U. directives function much like federal legislation, ultimately requiring Member States to comply with Union standards. In addition, the Union can issue "regulations" which, unlike directives, are directly binding on Member States. In other words, even if the European Union is not structured like typical federal systems, it often acts like one. For a detailed comparison of the American federal system and the European Union, see Thomas C. Fischer, *Federalism in the European Community and the United States: A Rose by any other Name . . .*, 17 *FORDHAM INT'L L.J.* 389 (1994).

51. EUROPEAN COMMUNITY ENVIRONMENT LEGISLATION, *supra* note 39, at xiii.

52. *See id.* at xiv.

53. George A. Bermann, *Taking Subsidiarity Seriously: Federalism in the European Community and the United States*, 94 *COLUM. L. REV.* 331, 349 (1994).

54. EUROPEAN COMMUNITY ENVIRONMENT LEGISLATION, *supra* note 39, at xii.

55. *Id.* at xv.

56. *Id.*

57. *Id.* at xv-xvi.

from each of the Member States, usually at the ministerial level.<sup>58</sup> The European Court of Justice ("Court") ensures that treaties and the Community laws are respected by the Member States. Judges on the Court are appointed by agreement among the Member States. The Court generally does not have the power to impose sanctions, but the Member States are required to comply with its rulings.<sup>59</sup>

The last entity of the European Union is the Parliament, a quasi-legislative branch of the supranational government that represents the interests of the citizens of the Community.<sup>60</sup> Parliamentary representatives are directly elected by voters in the Member States and are required to set aside their national allegiances to represent the interests of the citizens of the Community.<sup>61</sup> Although the Parliament is persuasive, it is not a true legislature because it cannot initiate or adopt legislation, but may only influence policy formation.<sup>62</sup>

Legislation may be adopted as either a directive or regulation.<sup>63</sup> Regulations are self-implementing and are binding on the Member States.<sup>64</sup> Directives, however, must be implemented by the Member States.<sup>65</sup> Directives set "broad objectives" and the individual Member State governments must adopt legislation necessary to incorporate the Community law or to bring the national law into compliance with the directive's provisions.<sup>66</sup>

The Treaty of Rome provisions determine which instruments are used for the adoption of Community laws.<sup>67</sup> They do not, howev-

58. *Id.* at xvi.

59. *Id.* at xix.

60. *Id.* at xvii.

61. *Id.* at xv.

62. *Id.* at xvii. "The Parliament did, however, acquire a formal role in adopting legislation when the Single European Act introduced the cooperation procedure." *Id.*

63. Thomas R. Munteer, *Proposed European Directive for Damage to the Environment Caused by Waste*, 23 ENVTL. L. 107, 113 (1993).

64. *Id.*

65. *Id.*

66. *Id.*

67. Koen Lenaerts, *The Principle of Subsidiarity and the Environment in the European Union: Keeping the Balance of Federalism*, 17 *FORDHAM INT'L L.J.* 846, 867 (1994).

er, specify which instrument must be used for Community regulation of environmental issues. Therefore, both regulations and directives have been used in Community actions involving air and water pollution legislation.<sup>68</sup>

*B. Limits on the Power to Harmonize: Subsidiarity,  
Proportionality*

The E.U.'s power to harmonize divergent laws among Member States is the cornerstone of the Community's federal powers. The E.C. treaties recognize that the goal of a free market may be hampered not only by national legislation that directly regulates the free movement of goods, but also by wide divergences in health, safety, and environmental legislation among the Member States.<sup>69</sup>

In order to address the impact of differing national laws, the E.C. adopted Article 100, authorizing the Council to enact directives to harmonize such laws.<sup>70</sup> Article 100, however, requires unanimous approval before a directive can be adopted.

Although not specifically addressed in the earlier Treaties, environmental issues were legislated under the harmonization provisions of Article 100. The adopted measures established product standards and technical rules regulating emissions intended to eliminate trade barriers by setting Community-wide standards. Although many important steps were taken, adopting tight standards for the protection of the environment was not the focus of the early environmental directives.<sup>71</sup>

As the economic barriers between member countries were slowly dismantled, the E.C. began to focus its attention on non-economic policies.<sup>72</sup> The shifting focus from protecting the free market to protecting the environment helped to reveal the weakness of the earlier Treaties' unanimous vote requirement.<sup>73</sup> The necessity of a

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68. *Id.*

69. Jochen Taupitz, *The German Environmental Liability Law of 1990: Continuing Problems and the Impact of European Regulation*, 19 SYRACUSE J. INT'L L. & COMM. 13, 32 (1993).

70. *Id.*

71. *Id.* at 33.

72. *Id.* at 32.

73. *Id.*

unanimous vote made the process of adopting strict environmental legislation difficult and resulted in States negotiating weak provisions in order to pass legislation.<sup>74</sup>

The adoption of the Single European Act of 1986 ("SEA") facilitated the environmental activities of the Union.<sup>75</sup> The SEA expressly addressed environmental legislation in Title VII, Articles 130(r)-130(t)<sup>76</sup> of which represents environmental protection and management as a legislative objective in its own right. In addition, the SEA also eliminated the unanimous vote requirement for harmonizing legislation. The new Article 100(a) allowed the adoption of harmonizing legislation by a qualified majority.<sup>77</sup>

The qualified majority system allows votes to be weighted on the basis of a Member State's size and economic importance.<sup>78</sup> Under the system, the largest Member States, including Germany, are given ten votes.<sup>79</sup> A qualified majority requires fifty-four votes for legislation to pass.<sup>80</sup> This system allows the impasse of a single Member Country's objection to be avoided in the development of environmental legislation.<sup>81</sup>

The goal of the Union is harmonization and not unification of laws.<sup>82</sup> By imposing higher national standards, Article 130(t)<sup>83</sup> allows Member States to maintain more stringent measures than those provided by E.C. legislation. However, this power to impose higher national standards is qualified by the requirement that national environmental laws be compatible with the Act and not hinder the free movement of goods.<sup>84</sup> Higher national standards are subject to review by the Commission, may not be arbitrarily discriminatory

74. See, e.g., Konrad von Moltke, *A European Perspective on Trade and the Environment*, in *TRADE AND THE ENVIRONMENT* 93, 103 (Durwood Zaelke *et al.*, eds., 1993).

75. *Id.* at 103.

76. Taupitz, *supra* note 69, at 33.

77. *Id.*

78. *Id.* at n.70.

79. *Id.*

80. *Id.*

81. *Id.* at 33.

82. Fischer, *supra* note 50, at 398 n.26.

83. Treaty of Rome, *supra* note 43.

84. Reh binder & Stewart, *supra* note 46, at 59.

and cannot have adverse effects disproportionate to the pursued objectives.<sup>85</sup> Furthermore, the standards must be necessary to achieve environmental objectives and must use the least restrictive means in regulating the free movement of goods.<sup>86</sup>

### 1. The Subsidiarity Principle

One of the issues in the development of the environmental agenda in the Community is whether the enactment of environmental legislation should ultimately be an exercise of power by the Member States or the Union. There is a need for a uniform approach throughout the Union to ensure adequate protection of the environment and prevent interstate discord. Conversely, allowing all decisions to be made at the national level would allow Member States to control environmental policy impacting local environmental quality.<sup>87</sup> The principle of subsidiarity has served to mediate these competing concepts of federalism and proximity.

The concept of subsidiarity requires that "regulatory decisions be taken at the lowest effective level."<sup>88</sup> Subsidiarity prevents the Union from encroaching on the prerogatives of the Member States to regulate local affairs. The principle was expressed in the Treaty on the European Union<sup>89</sup> as a part of Article 3b which states in relevant part:

In areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and in-so-far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and

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85. *Id.*

86. von Moltke, *supra* note 74, at 275.

87. Bermann, *supra* note 53, at 339. In his article, *Taking Subsidiarity Seriously: Federalism in the European Community and the United States*, Professor Bermann presents six fundamental reasons why there is a preference for governance at the most local level. These are: self-determination and accountability, political liberty, flexibility, preservation of identities, diversity, and respect for internal divisions of component states.

88. Fischer, *supra* note 50, at 425. Fischer also compares the concept of subsidiarity as a limitation on Community powers with the "necessary and proper" clause of the United States Constitution as a limitation on the legislative powers of the United States government. *Id.* at 437.

89. Treaty of Rome, *supra* note 43.

can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community.<sup>90</sup>

Even before its recognition in the Treaty on the European Union, the principle of subsidiarity was evident in the environmental provisions of the Single European Act.<sup>91</sup> Article 130r(4)<sup>92</sup> authorizes the Community to take action relating to the environment as long as the expressed objectives could be achieved better at the Community level than at the level of the individual Member States.<sup>93</sup>

Guidelines adopted by the European Council to determine whether the regulations adopted by the Member States have proven ineffective and whether action at the Community level is warranted,<sup>94</sup> make clear that the environment is perceived as a Union-wide issue. In general, the individual Member States cannot effectively address the transboundary aspects of environmental policy and the risks of trade restrictions and market distortions are elevated.<sup>95</sup>

Subsidiarity is also achieved by the use of directives at the Community level for the purposes of harmonizing national laws and en-

90. Treaty on European Union, Feb. 7, 1992, O.J. C 224/01 (1992), [1992] 1 C.M.L.R. 719, 31 I.L.M. 247 (1992), *as discussed in* Lenaerts, *supra* note 67, at 848. The provision is interpreted to require the need for Community action to be assessed "only if" and that the extent of the action be determined "in so far as." *Id.* at 875.

91. Single European Act ("SEA"), O.J. L 169/1 (1987), [1987] 2 C.M.L.R. 741.

92. Treaty Establishing the European Economic Community, Mar. 25, 1957, 298 U.N.T.S. 11, 1973 Gr. Brit. T.S. No.1 (Cmd. 5179-II)("E.C. Treaty"), *as amended by* Single European Act, *supra* note 91.

93. *Id.*

94. The Guidelines adopted by the European Council at its Edinburgh Meeting, December 11, 1992, are as follows:

1. the issue under consideration has transnational aspects which cannot be satisfactorily regulated by action by Member States; and/or

2. actions by Member States alone or lack of Community action would conflict with the requirements of the Treaty or would otherwise significantly damage Member States' interests; and/or

3. the Council must be satisfied that action at Community level would produce clear benefits by reason of its scale or effects compared with actions at the level of the Member States.

See Lenaerts, *supra* note 67, at 878, for a discussion of these guidelines and their applicability to environmental policy at the Community level.

95. See Lenaerts, *supra* note 67, at 878.

trusting the execution of Community law to the Member States. A directive is "binding as to the result to be achieved, upon each Member State to which it is addressed, but [leaves] to the national authorities the choice of form and methods."<sup>96</sup> This would, for instance, allow the Union to set a minimum recycling rate for the Community, but would give the power to interpret the Directive and implement its provisions to the Member States. This would provide the flexibility to govern environmental issues to some degree at the local level.<sup>97</sup>

In its Report to the European Council, "the Commission made it clear that it will not allow the application of the subsidiarity principle to lower or compromise the high level of existing Community environmental standards."<sup>98</sup> Hence, Article 130t allows Member States to adopt more stringent environmental measures so long as they are not used to create a barrier protecting domestic trade from competition.<sup>99</sup> Article 130t states in relevant part that "protective measures adopted in common . . . shall not prevent any Member State from maintaining or introducing more stringent protective measures."<sup>100</sup> However, the Article cautions that "such measures must be compatible with this Treaty . . . ."<sup>101</sup> This provision thereby preempts a Member State's power to adopt an environmental measure that results in market distortion.

## 2. The Proportionality Doctrine

The doctrine of proportionality serves to limit the means available to the Community to act.<sup>102</sup> The E.C. Treaty states that "any action by the Community shall not go beyond what is necessary to achieve the objectives of this Treaty."<sup>103</sup> The 1992 European Council, in its Edinburgh Conclusions, clarified the doctrine's application to policy-making.<sup>104</sup> According to the Council's guide-

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96. Lenaerts, *supra* note 67, at 853 (quoting E.C. Treaty, *supra* note 92).

97. *Id.*

98. *Id.* at 888.

99. *Id.* at 862-63.

100. *Id.* at 862 (quoting E.C. Treaty, *supra* note 92, at art. 130t).

101. *Id.*

102. Bermann, *supra* note 53, at 369.

103. *Id.* at 346 n.41 (quoting E.C. Treaty, *supra* note 92, art. 3b).

104. The guidelines from the Edinburgh Conclusions state as follows:



lines, financial or administrative burdens in legislation should be minimized and "should be proportionate to the objective to be achieved."<sup>105</sup>

Proportionality may be described as a principle of judicial re-

ii) Any burdens, whether financial or administrative, falling upon the Community, national governments, local authorities, economic operators and citizens, should be minimised and should be proportionate [sic] to the objective to be achieved.

iii) Community measures should leave as much scope for national decision as possible, consistent with securing the aim of the measure and observing the requirements of the Treaty. While respecting Community law, care should be taken to respect well established national arrangements and the organisation and working of Member States' legal systems. Where appropriate and subject to the need for proper enforcement, Community measures should provide Member States with alternative ways to achieve the objectives of the measures.

iv) Where it is necessary to set standards at Community level, consideration should be given to setting minimum standards, with freedom for Member States to set higher national standards . . . where this would not conflict with the objectives of the proposed measure or with the Treaty.

v) The form of action should be as simple as possible, consistent with satisfactory achievement of the objective of the measure and the need for effective enforcement. The Community should legislate only to the extent necessary. Other things being equal, directives should be preferred to regulations and framework directives to detailed measures. Non-binding measures such as recommendations should be preferred where appropriate. Consideration should also be given where appropriate to the use of voluntary codes of conduct.

vi) Where appropriate under the Treaty, and provided this is sufficient to achieve its objectives, preference in choosing the type of Community action should be given to encouraging cooperation between Member States, coordinating national action or to complementing, supplementing or supporting such action.

vii) Where difficulties are localized and only certain Member States are affected, any necessary Community action should not be extended to other Member States unless this is necessary to achieve an objective of the Treaty.

25 E.C. Bull., no. 12, at 14-16, 94 (1992). *See also* Bermann, *supra* note 53, at 387 n.234 (quoting European Council in Edinburgh, Conclusions of the Presidency, December 12-13, 1992).

105. Lenaerts, *supra* note 67, at 884 (quoting 25 E.C. Bull., no. 12, at 15, ¶ 4 (1992)).

view.<sup>106</sup> Every Community action must satisfy three criteria to avoid violating the proportionality principle.<sup>107</sup> First, the rationality criterion requires that the measure be reasonably, and presumably legitimately, related to the objective the action is intended to serve. Second, the utility component dictates that the costs of the action "must not manifestly outweigh its benefits."<sup>108</sup> Finally, the chosen action must be the least burdensome of the available alternatives.<sup>109</sup>

In the field of environmental policy, the doctrine of proportionality demands that Community actions should leave "as much scope for national decisions as possible."<sup>110</sup> Again, a directive is the favored form of legislation as a proportional instrument. Directives allow the Member States to choose the form or method of implementing legislation which provides minimum standards and permits national standards to exceed Community-wide standards.<sup>111</sup>

### III. ENVIRONMENTAL LEGISLATION IN THE EUROPEAN UNION

The establishment of a separate and distinct environmental policy in the Union allows the selection of harmonization candidates based upon environmental priorities rather than on the extent to which variations in national laws operate as a trade barrier.

#### A. *Environmental Action Programs*

The European Union uses two measures to address environmental issues: environmental action programs and legislation. Action programs are strategic environmental frameworks used to set broad environmental policy.<sup>112</sup> The programs, developed by the Commission and approved by the Council, are considered general statements of intent as there is no formal commitment to take actions on

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106. Bermann, *supra* note 53, at 387.

107. *Id.* at 386.

108. *Id.*

109. *Id.*

110. Lenaerts, *supra* note 67, at 884 (quoting 25 E.C. Bull.).

111. *Id.* at 853-54.

112. AIR POLLUTION CONTROL IN THE EUROPEAN COMMUNITY 1 (Graham Bennett, ed., 1991).

the proposals included in the programs.<sup>113</sup> Currently, the European Union is working under its fifth action program.<sup>114</sup>

The earliest action programs focused on broad principles, while later programs became increasingly substantive.<sup>115</sup> The 1973 environmental action program represented the first specific political commitment to tackle an expansive range of environmental problems at the supranational level, yet lacked concrete control measures.<sup>116</sup>

The 1977 action program designated pollutants as candidates for air quality standards.<sup>117</sup> The third program, in 1982, recognized the problems of acid rain and other trans-boundary pollutants.<sup>118</sup> The objective of the action program, covering the years 1987 to 1992, was to set and implement Community standards for emissions reductions to combat acid deposition and slow forest die-back.<sup>119</sup>

The current action program, adopted in 1992 and entitled "*Towards Sustainability: A European Community Programme of Policy and Action in Relation to the Environment and Sustainable Development*," addresses the period between 1993 and 2000 and calls for greater cooperation between consumers, industry, and government.<sup>120</sup> The major objectives of the program are: sustainable development, integration of environmental policy into all E.C. legislation, and shared responsibility.<sup>121</sup> This action program explicitly recognizes the principle of subsidiarity.

Community-wide legislation is adopted to meet the goals of the

113. *Id.*

114. *See 5th Action Programme Passes Test by Council of Ministers*, EUROPEAN INTELLIGENCE, Jan. 19, 1993, available in LEXIS, News Library, EURINT File.

115. AIR POLLUTION CONTROL IN THE EUROPEAN COMMUNITY, *supra* note 112, at 1.

116. *Id.*

117. *Id.*

118. *Id.*

119. *Id.* at 1-2.

120. *5th Action Programme Passes Test by Council of Ministers*, *supra* note 114, at 1.

121. For a discussion of the current action program, *see 5th Action Programme Passes Test by Council of Ministers*, EUROPEAN INTELLIGENCE, *supra* note 114; *Main Lines of Community Action for the First Half of 1993*, EUROPE ENERGY, Jan. 22, 1993.

programs. Since the first action program, over 200 environmental measures have been adopted.<sup>122</sup> Legislation is often in the form of non-binding recommendations and resolutions, decisions binding upon the addressee, and regulations that are directly binding on all Member States.<sup>123</sup> Directives which must be implemented by the laws or regulations of the States, have been the main tool of Community environmental policy for the last twenty years.<sup>124</sup>

### B. *European Union Air Quality Directives*

The European Community first began to regulate air quality at the federal level in 1970.<sup>125</sup> Its earliest directives established emissions limits for motor vehicles and set fuel standards for sulfur and lead content.<sup>126</sup> These limits were intended to eliminate the trade barriers resulting from differing national standards.<sup>127</sup> It was not until 1980 that the E.C. introduced the first Community-wide ambient air quality standards for sulphur dioxide and suspended particulates (dust).<sup>128</sup> This act fulfilled the E.C.'s obligation as a signatory of the 1979 Geneva Convention on Long-Range Transboundary Air Pollution.<sup>129</sup> Some Member Countries objected to the Community-wide air quality standards. The German govern-

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122. AIR POLLUTION CONTROL IN THE EUROPEAN COMMUNITY, *supra* note 112, at 1.

123. EUROPEAN COMMUNITY ENVIRONMENT LEGISLATION, *supra* note 39, at xiv.

124. *Id.* at xiii-xiv.

125. von Moltke, *supra* note 74, at 98-99. For further discussion of the European Union directives regarding air quality and emissions standards, see STANLEY P. JOHNSON & GUY CORCELLE, THE ENVIRONMENTAL POLICY OF THE EUROPEAN COMMUNITIES 109-157 (Graham & Trotman 1989).

126. AIR POLLUTION CONTROL IN THE EUROPEAN COMMUNITY, *supra* note 112, at 3.

127. *Id.* at 3.

128. *Id.* at 2.

129. Armin Rosencranz, *The ECE Convention of 1979 on Long-Range Transboundary Air Pollution*, 75 A.J.I.L. 975-77 (1981). The Geneva Convention is an environmental agreement signed by, *inter alia*, the U.S. and Canada and designed to reduce air pollution. The Convention requires that the contracting parties develop policies and strategies to reduce air pollution, particularly sulphur emissions. It also contains provisions regarding monitoring, information exchange, consultations, and research. *Id.*

ment complained that it would be unable to meet the E.C. standards in many industrialized regions of the country without implementing costly pollution control measures.<sup>130</sup> Germany's position changed within a few years, however, after studies appeared documenting extensive forest damage from air pollution throughout Germany, Switzerland, and Austria.<sup>131</sup> In response, the German government adopted national emissions standards even more stringent than the E.C. Air Quality Directive required.<sup>132</sup>

Germany's pollution emissions limits have been described as "draconian."<sup>133</sup> They require all existing fossil fuel fired power plants to retro-fit state of the art sulfur dioxide and nitrogen oxide emissions control equipment. The German government even attempted to persuade the E.C. to impose its domestic emissions standards Community-wide, in recognition of the fact that Germany's forests were being affected by pollution emissions from other E.C. Member States. This effort, however, was only partially successful. The E.C. issued a directive adopting the German emissions standards for new plants, but Member States were given broad discretion to determine how much to reduce their emissions from 1980 levels.<sup>134</sup>

While the E.C. has declined to adopt Germany's stringent emissions standards wholesale, the lower Community-wide standards have still resulted in reduced emissions levels in a majority of Member States.<sup>135</sup> In 1986, the Commission of the European

130. JOHNSON & CORCELLE, *supra* note 125, at 110. Early German and United Kingdom opposition rendered effective control of power plant emissions impossible, and all countries sought to hinder the rigorous control of automobile emissions. von Moltke, *supra* note 74, at 98.

131. JOHNSON & CORCELLE, *supra* note 125, at 110.

132. von Moltke, *supra* note 74, at 98.

133. JOHNSON & CORCELLE, *supra* note 125, at 110.

134. von Moltke, *supra* note 74, at 99. Having encouraged tighter standards, however, Germany has arguably not even fully complied with the lower standards imposed by the European Union. An ordinance implementing three European Community air quality directives regarding standards for sulfur dioxide, suspended particles, nitrogen dioxide and lead was approved in February of 1993 after Germany was found to be in violation of two directives in 1991 and forced to strengthen its air quality regulations. *Cabinet Approves Ordinance to Implement Three EC Directives on Air Quality Limits*, Mar. 5, 1993, available in LEXIS, ENVIRN Library, BNAIED File.

135. JOHNSON & CORCELLE, *supra* note 125, at 110. "Even if most Community

Communities reported steadily declining levels of air pollution throughout the region.<sup>136</sup> More recently, the Economic Commission for Europe reported that all but the most economically-disadvantaged countries in the E.C. had experienced substantial reductions in annual sulfur emissions.<sup>137</sup> The figures from that report are shown in Table 3.<sup>138</sup> Germany's 1988 sulfur emissions declined to less than 50 percent of its 1980 emissions level even though the E.C. adopted less stringent standards. In fact, the emissions data show reduced SO<sub>2</sub> emissions in almost all Member Countries.

**Table 3**  
**European Emissions of Sulphur Dioxide**

|               | SO <sub>2</sub> (1000 ton/yr) |      |      |
|---------------|-------------------------------|------|------|
|               | 1980                          | 1985 | 1988 |
| Austria       | 195                           | 95   | 61   |
| Belgium       | 414                           | 226  | 207  |
| Denmark       | 224                           | 170  | 121  |
| Finland       | 292                           | 191  | 151  |
| France        | 1670                          | 738  | 607  |
| Germany (FRG) | 1600                          | 1200 | 620  |
| Greece        | 200                           | 250  | -    |
| Ireland       | 110                           | 69   | 74   |
| Italy         | 1900                          | 1252 | 1205 |
| Luxembourg    | 12                            | 8    | -    |
| Netherlands   | 248                           | 137  | 139  |
| Portugal      | 133                           | 99   | 102  |
| Spain         | 1625                          | 1095 | -    |
| Sweden        | 256                           | 142  | 107  |
| United        | 2447                          | 1859 | 1907 |

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measures do not go as far as the German Government might have wished, they do nevertheless have a much wider field of application [which] increas[es] the effectiveness of the fight against atmospheric pollution, which by its very nature recognizes no borders." *Id.*

136. THE STATE OF THE ENVIRONMENT IN THE EUROPEAN COMMUNITY, 131-177 (Commission of the European Communities 1986). Although the Commission attributes much of the decline to economic slowdown, the report recognizes the contribution of European Community directives in the improvement. *Id.*

137. U.N. ECONOMIC COMMISSION FOR EUROPE, THE ENVIRONMENT IN EUROPE AND NORTH AMERICA, Annotated Statistics 1992, at 65-69, U.N. Sales No. 92-II-E-14 (1992).

138. ECONOMIC COMMISSION FOR EUROPE, THE ENVIRONMENT IN EUROPE AND NORTH AMERICA, ANNOTATED STATISTICS 1992, at 67 tbl. I-2.1.3, U.N. Sales No. 92-II-E.14 (1992).

Similarly, there has been a reduction in carbon and lead emissions and total suspended particles in the Member States. Although the data is not complete, the Economic Commission tables reproduced in Table 4, show a general trend toward decreasing emissions.<sup>139</sup>

**Table 4**  
**European Emissions of**  
**Carbon Dioxide, Lead and Total and Total Suspended Particles**

|                  | CO <sub>2</sub> (1000 tons) |        |        | LEAD (1000 tons) |       |       | TSP (1000 tons) |      |      |
|------------------|-----------------------------|--------|--------|------------------|-------|-------|-----------------|------|------|
|                  | 1980                        | 1985   | 1988   | 1980             | 1985  | 1988  | 1980            | 1985 | 1988 |
| Austria          | -                           | 56300  | 56500  | 0.966            | 0.293 | 0.258 | 75              | 55   | 39   |
| Belgium          | -                           | -      | -      | -                | -     | -     | -               | -    | -    |
| Denmark          | 63000                       | 62300  | 57900  | -                | -     | -     | -               | -    | -    |
| Finland          | 54300                       | 48600  | 52000  | -                | -     | 0.45  | 97              | -    | -    |
| France           | 449800                      | 303900 | 279200 | -                | -     | -     | 427             | 324  | 284  |
| Germany (F.R.G.) | 780000                      | 720000 | 710000 | -                | 4.4   | 3.1   | 690             | 580  | 530  |
| Greece           | -                           | -      | -      | -                | -     | -     | -               | -    | -    |
| Ireland          | -                           | -      | -      | 0.9              | 0.4   | -     | 94              | 117  | -    |
| Italy            | -                           | -      | -      | -                | -     | -     | 386             | 390  | 452  |
| Luxembourg       | -                           | -      | -      | -                | -     | -     | -               | -    | -    |
| Netherlands      | 150000                      | 149000 | 148000 | 1.3              | 1.4   | 0.45  | 146             | 99   | 93   |
| Portugal         | -                           | -      | 37800  | -                | -     | -     | 119             | 93   | -    |
| Spain            | -                           | -      | -      | -                | -     | -     | 1521            | 1583 | -    |
| Sweden           | 81000                       | 67000  | 63000  | -                | -     | -     | 170             | -    | -    |
| United Kingdom   | 602900                      | 567400 | 584800 | 7.5              | 6.5   | 3.1   | 572             | 555  | 533  |

As with the case of federal pollution control in the United States,<sup>140</sup> the European Union's experience with the regulation of air pollution suggests that the federalization of pollution control can have a pronounced positive impact on region-wide or continent-wide environmental quality, despite its limiting effect on the ability of Member States to further improve their own environmental quality by adopting more stringent standards. As the study of packaging waste regulation shows, when Member States are free to adopt more stringent standards, they tend to improve their own environmental quality at the expense of other Member or non-member States.<sup>141</sup>

139. *Id.* at 69-70 tbls. I-2.1.5 & I-2.1.6.

140. *See supra* notes 5-11 and accompanying text.

141. *See infra* notes 164-236 and accompanying text.

#### IV. A CASE STUDY: PACKAGING WASTE REGULATION IN THE E.U.

The first packaging waste legislation was passed by the German government in 1991.<sup>142</sup> France followed with a similar law in 1993.<sup>143</sup> The Dutch government also addressed the issue of packaging waste in 1991, but in the form of voluntary agreements with industry rather than legislation.<sup>144</sup> The European Commission first proposed a harmonizing directive on packaging and packaging waste in 1992, but the legislation was not enacted until the end of 1994. Between the Directive's proposal and passage, the Member States contested the recovery and recycling target rates and the allowance of incineration.<sup>145</sup> This Part details the legislation that was originally adopted in Germany, France, and The Netherlands. It also describes the Directive that was recently passed in the European Union, and the impact the legislation is likely to have on the regional environment.

##### A. *The German Packaging Ordinance*

Germany, with a population of 81 million, is Europe's largest waste producer and trash exporter.<sup>146</sup> To deal with the increasingly difficult problem of waste disposal, Germany developed a regulatory scheme based on the concept of *Kreislaufwirtschaft*, or a closed circulatory economy where all products are reused.<sup>147</sup>

The movement toward a closed circle economy began in 1991 with the passage of the German Ordinance on the Avoidance of Packaging Waste.<sup>148</sup> The *Verpackungsverordnung*, or *Töpfer Law* as it is often called in reference to former German Environmental

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142. THE PACKAGING ORDINANCE AND INTERNATIONAL TRADE, § 1(1) Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, June 23, 1993 (F.R.G.).

143. See *infra* notes 237-49 and accompanying text.

144. See *infra* notes 252-285 and accompanying text.

145. See *infra* notes 315-16 and accompanying text.

146. Ferdinand Protzman, *Germany's Push to Expand the Scope of Recycling*, N.Y. TIMES, July 4, 1993, at 8.

147. Ariane Genillard, *Business and the Environment: Too Much of a Good Thing*, FIN. TIMES (LONDON), June 23, 1993, at 18.

148. *Id.*



Minister Klaus Töpfer, went into effect on June 12, 1991.<sup>149</sup> The objective of the Ordinance was to reduce packaging to the extent possible and reuse or recycle packaging that could not be eliminated.<sup>150</sup> The law was ground-breaking environmental legislation, widely regarded as establishing the world's strictest recycling requirements.

The Ordinance establishes the amount of waste that must be recycled by setting both collection targets and sorting targets for products placed on the German market, with the sorting target expressed as a percentage of the material collected.<sup>151</sup> Recycling quotas are set based on the type of material and, with a short phase-in period, the quotas must reach their targets by 1995. Effective July 1, 1995, the minimum collection rates are 80% for all materials, and sorting targets range from 80% of plastics, paper, and cardboard to 90% of glass, tin plate, and aluminum packaging.<sup>152</sup> Under the current Ordinance, incineration for energy recovery is not permitted, so that all material collected and sorted must be recycled.<sup>153</sup> The quotas are staggering for some materials; for example, prior to the law's adoption, only 4% of plastics were recycled.<sup>154</sup>

### 1. Packaging Waste Take-back Requirements

The *Töpfer Law* imposes a "take back" requirement on industry to encourage the re-use or recycling of packaging materials. The Ordinance has two underlying premises: first, packaging materials should not become waste; and second, those who sell packaged

149. Verpackungsverordnung ("Verpack VO") [Ordinance on the Avoidance of Packaging Waste], June 12, 1991 (promulgated pursuant to Abfallgesetz [Waste Avoidance and Waste Management Act] 1986 Bundesgesetzblatt [BGBl.] I 1410) [hereinafter Ordinance].

150. THE PACKAGING ORDINANCE AND INTERNATIONAL TRADE, *supra* note 142, at § 1(1).

151. Ordinance, *supra* note 149, at Annex to Art. 6, ¶ 3, § 2, Quantitative Requirements for Collecting Systems, and § 3 Quantitative Requirements to be Met by Sorting Facilities.

152. *Id.*

153. *Id.*

154. E. Gifford Stack, *Green Dot Not for U.S.: Germany's Packaging Law Doesn't Make Sense Here*, BEVERAGE INDUSTRY, Sept. 1993, at 50.

products should be responsible for disposing of the packaging material in an environmentally conscientious manner.<sup>155</sup>

The take back requirement applies to both consumer packaging and commercial transport, display, and sales packaging regardless of the material.<sup>156</sup> Transport and display packaging must be taken back and recycled or reused by each link in the distribution chain.<sup>157</sup> Sorting and recycling targets are not prescribed for transport and "secondary" packaging.<sup>158</sup> Recycling for these materials is only required where "technically possible and economically justifiable."<sup>159</sup> If the packaging is not recycled or reused, the manufacturer or distributor must pay for the material's disposal through private means. The public waste management system presently does not accept packaging waste.<sup>160</sup>

Sales packaging, regardless of the brand or place of purchase, must be taken back without charge from the end-user by all packaging related businesses in or near their stores.<sup>161</sup> An exemption to the law, however, allows manufacturers to relieve themselves of the duty to take back packaging waste from the final consumer by participating in a government approved waste management system.<sup>162</sup> The system that resulted from this exemption remains a

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155. Pan Demetrakakes, *European Packaging Laws: A Pandora's Box; Laws are Complex and Compliance is Costly*, PACKAGING, Feb. 1993, at 51.

156. THE PACKAGING ORDINANCE AND INTERNATIONAL TRADE, *supra* note 142, at § 2, ¶ 8.

157. Turner T. Smith & Lucas S. Bergkamp, *Packaging Waste Developments in Germany and the Netherlands* (BNA) Oct. 9, 1991, available in LEXIS, Envirn Library, BNAIED File.

158. THE PACKAGING ORDINANCE AND INTERNATIONAL TRADE, *supra* note 142, at § 2, ¶ 7.

159. *Id.* "For transport and secondary packaging collection, sorting and reuse quota are not prescribed . . . ; the packaging has to be recycled whenever this is technically possible and economically justifiable and where a market for the substances thus recovered already exists or can at least be built up." *Id.*

160. *Id.* "What is not allowed in any case, however, is disposal via the general, publicly financed waste disposal system, so that the manufacturer or distributor has indeed to pay for the actual disposal costs in all cases where reuse/recycling is not possible or is not justifiable from an economic point of view." *Id.*

161. Smith & Bergkamp, *supra* note 157.

162. *Id.* at § 2, ¶ 10. "Pursuant to Art. 6 para. 3 of the Ordinance the obligation to accept the return of the packaging does not apply to manufacturers and

model for other European Union countries.<sup>163</sup>

## 2. The *Duales System Deutschland*

To meet the consumer packaging take-back requirement, a consortium for waste collection, the *Duales System Deutschland* ("DSD"), was created by numerous and diverse business groups.<sup>164</sup> The DSD is a private organization with over 400 shareholders that collects and sorts waste from over 96% of German households.<sup>165</sup> The *Töpfer Law* imposes few requirements on the DSD.<sup>166</sup> It is largely left to private industry and the market to make the system work.<sup>167</sup> But the stakes are high: if the DSD fails to meet the recycling quotas imposed by the *Töpfer Law*, retailers are legally bound to take back packaging material directly from their customers.<sup>168</sup>

Fees charged by the DSD are based on the "polluter pays" principle, which dictates that whoever uses or manufactures a product should share the responsibility for the pollution costs associated with the product.<sup>169</sup> DSD is funded by variable license fees paid by manufacturers, distributors, or importers based upon the volume of packaging and, as of October of 1993, a product's packaging materials.<sup>170</sup> This forces manufacturers to internalize the cost of the DSD so that product prices paid by the consumer reflect the

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distributors who are party to a so-called dual collection system which takes over the blanket collection of used sales packaging from the final consumer." *Id.*

163. *European Packaging Laws: Take-back Schemes, Product Standards, and Eco-taxes*, 17 Int'l Env't Rep. (BNA) No. 4, 158, 192 (Feb. 23, 1994).

164. THE PACKAGING ORDINANCE AND INTERNATIONAL TRADE, *supra* note 142, at § 3, ¶ 12. The term *Duales System Deutschland* means "Dual System Germany."

165. Genillard, *supra* note 147, at 18.

166. Regulations concerning this system merely contain certain collection and sorting quotas as well as certain target quotas for the maintenance of the existing levels achieved in the reuse of drinks packaging. THE PACKAGING ORDINANCE AND INTERNATIONAL TRADE, *supra* note 142, at § 3, ¶ 12.

167. Smith & Bergkamp, *supra* note 157.

168. Genillard, *supra* note 147, at 18.

169. *Has Germany Bitten Off More Than it Can Chew?*, PACKAGING WEEK, Apr. 8, 1993, at 22.

170. *Id.*

recycling cost of the product packaging.<sup>171</sup> Payment of the fee is evidenced by a *Grüner Punkt*, or green dot, on the product which indicates to consumers that the material will be reused or recycled.<sup>172</sup> A package bearing a green dot costs consumers on average an additional two *pfennigs* (the equivalent of approximately 1.4 cents),<sup>173</sup> but no longer has to be taken back by the retailer after use.<sup>174</sup>

The DSD does not engage in recycling, but relies on other entities to recycle the material it collects and sorts. Therefore, the DSD does not issue a license for any sales package for which a binding agreement to recycle has not been made.<sup>175</sup> Since products whose packaging does not contain DSD's green dot can be returned to the place of purchase, German retailers are increasingly requiring licensed products from their suppliers.<sup>176</sup>

Critics argue that the DSD duplicates the municipal waste management system and ignores the existing infrastructure established by the *Töpfer Law*.<sup>177</sup> The DSD consortium is far from akin to a public waste management system. The use of the public waste management system for collection of packaging materials is inconsistent with the government's aim to force industry to manage its own packaging waste and eliminates the incentive to reduce excess packaging. The DSD, however, furthers the government objectives by making industry and business groups directly responsible for the law's collection and sorting targets for consumer sales packaging waste.<sup>178</sup>

The DSD has also been accused of "fostering a concentration in the waste industry" by its use of a network of disposal

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171. Stack, *supra* note 154, at 50.

172. *Id.*

173. Demetrakakes, *supra* note 154, at 51. See also Ariane Genillard, *Falling Victim to Its Own Success—Germany's Recycling Scheme is Under Attack From Both Industry and Environmentalists*, FIN. TIMES, Jan. 27, 1993, at 16.

174. Demetrakakes, *supra* note 154, at 51.

175. Smith & Bergkamp, *supra* note 156.

176. Stack, *supra* note 153, at 50.

177. *Id.*

178. *Packaging Waste Developments in Germany and The Netherlands*, 14 Int'l Env't Rep. (BNA) No. 19, 522, 524-25 (Sept. 25, 1991).

contractors.<sup>179</sup> Small recyclers dependent on the DSD to supply collected waste claimed that the system prevented competition and was forcing them out of business. Members of the recycling industry associated with the DSD claim that large investments are necessary for recycling under the system.<sup>180</sup> Although recycling and waste disposal companies freely compete for commissions from the company, the DSD sought to appease independent waste haulers who attacked the system as anti-competitive by offering a compensation measure.<sup>181</sup>

In recent years, Germany's Federal Cartel Office has investigated claims that the private collection system was fostering a monopoly, and in 1992 ruled against any extension of the DSD's activities to commercial waste.<sup>182</sup> Presently, the DSD's responsibility for waste collection only extends to households, cafés, bars, and small businesses.<sup>183</sup> Further fueling the controversy, the DSD also found itself nearing bankruptcy in 1993. The company did not generate sufficient funds from its green dot licensing to manage the quantity of waste it received.<sup>184</sup> One source suggested that some manufacturers were reporting the volume of their sales inaccurately and, thus, making under-payments for the DSD licenses.<sup>185</sup> Although 90% of the primary packaging on German markets carries the green dot for recycling, it was estimated that only 60% of the companies paid the DSD licensing fees in 1993.<sup>186</sup>

Additionally, the system was overburdened by its own success. The recycling program is voluntary for German consumers. The public participated enthusiastically and put out three or four times the amount of packaging materials for pick-up than was anticipat-

179. Genillard, *supra* note 173, at 16.

180. *Id.*

181. Jon Reeds, *UK: Government Fears Big Recycling "War,"* REUTER TEXTLINE SURVEYOR, Mar. 25, 1993.

182. Michael Rose & David Perchard, *Business and the Law: When Waste is not Wanted—Germany's Recycling Legislation*, FIN. TIMES, Jan. 25, 1994, at 18.

183. *Id.*

184. *Id.*

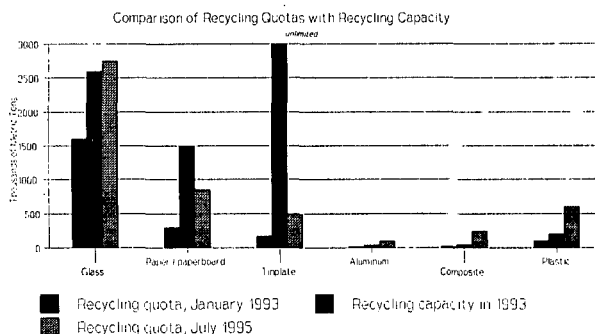
185. Victor D. Chase, *The German Packaging Experience*, APPLIANCE MANUFACTURER, Apr. 1, 1994, at 12.

186. *Germany's Polluter-Pays Concept Viewed As Possible Model For U.S. Industry, Public*, 24 Env't. Rep. (BNA) No. 50, 2098, 2099 (Apr. 15, 1994).

ed,<sup>187</sup> 40% of which were not even licensed to be collected by the DSD.<sup>188</sup> Since consumers were not charged for waste pick-up, the volume of waste overwhelmed the financial capabilities of the DSD.<sup>189</sup>

### B. Results of the Ordinance in Germany

When the Packaging Ordinance went into effect, the German recycling industry was not prepared to fulfill the law's requirements.<sup>190</sup> Although some recycling industries, like the glass industry, were well developed before the law's implementation, and were able to handle the increased demands, the capacity of other less developed recycling industries have remained below the targets set by the Ordinance.<sup>191</sup> German warehouses have been stacked to the ceiling with sorted packaging being stored for recycling for which no resale market exists.<sup>192</sup> The DSD was concerned about the recycling responsibilities it would be facing, and consequently looked to industry to invest in recycling facilities. Bette Fishbein provides a chart comparing recycling quotas with recycling capacity in Germany in her book, *GERMANY, GARBAGE AND THE GREEN DOT: CHALLENGING THE THROWAWAY SOCIETY*.<sup>193</sup>



187. Ann Kulik, *German Waste Disposal Evolves Under New Laws*, WORLD WASTES, Sept. 1993, at 16.

188. Chase, *supra* note 185.

189. Rose & Perchard, *supra* note 182.

190. *Id.* See also Genillard, *supra* note 173.

191. *Id.*

192. See Steven P. Reynolds, *Recycling: A Report from the Laboratories*, 4 VILL. ENVTL. L.J. 323, 344 (1993).

193. BETTE K. FISHBEIN, *GERMANY, GARBAGE, AND THE GREEN DOT: CHALLENGING THE THROWAWAY SOCIETY* 56 (1994).

The data from this graph shows the DSD's lack of capacity to meet the 1995 targets of the Ordinance. However, these figures were derived from data provided by the DSD and, admittedly, include contracts for recycling in other countries. Domestic capacity is undoubtedly smaller; thus, the variance between quota and capacity is substantially higher than the graph indicates. Additionally, the data regarding the material for recycling merely lists the Ordinance's quota for recycling, and not the amount of material collected. Therefore, the actual amount of packaging material collected for recycling is, in reality, up to ten times higher than the 1993 quota. This disparity exists because for some material, such as plastic, the original quota was only 10% of the material collected.

This leaves mountains of recyclable waste for which no domestic recycling capacity exists. The lack of technical capacity and the high costs of landfilling the unrecycled waste has created a tremendous economic incentive to export packaging waste to other E.U. Member and non-member Countries.

The chemical industry, specifically, has been criticized for defaulting on its promise to develop new recycling technologies.<sup>194</sup> But Germany is currently in the midst of an economic recession. If the chemical companies are already losing money, where will the money for this type of investment come from?<sup>195</sup>

Most companies pass the cost of recycling their product's packaging waste onto the consumer, thereby increasing Germany's already high product prices and possibly eroding German competitiveness.<sup>196</sup> The law has increased Germany's already large bureaucracy. With a six billion dollar price-tag to start, and an estimated annual cost of two and a half billion,<sup>197</sup> the cost may drive companies with small profit margins out of business.

Regardless of the claimed negative economic impact of the Ordinance, the German government is expanding its waste management regulation beyond packaging to include recycling products themselves.<sup>198</sup> Legislation has been proposed requiring that automo-

194. Kulik, *supra* note 187, at 16.

195. Genillard, *supra* note 173, at 16.

196. Kulik, *supra* note 187, at 16.

197. Genillard, *supra* note 147, at 18.

198. Stack, *supra* note 154, at 50.

biles and electronic products be recycled at the end of their useful lives.<sup>199</sup>

### C. European Impacts of the German Ordinance

The DSD consortium became financially stable in 1994.<sup>200</sup> However, the volume of waste that continues to be collected is still creating problems for Germany and other Member States of the European Union.<sup>201</sup> German processing capacity proved woefully inadequate to handle the packaging material landslide that the law brought about, resulting in large surpluses of recyclable materials.<sup>202</sup>

In 1993, Germany had a waste paper surplus estimated at two million tons<sup>203</sup> and collected approximately four times the amount of plastics that its infrastructure had the capacity to recycle.<sup>204</sup> In the same year, Germany collected 400,000 tons of plastics but only had the capacity to recycle 124,000 tons.<sup>205</sup> It was estimated that an additional 152,000 tons of plastic could be recycled in other countries in Europe<sup>206</sup> and "as far away as the Far East."<sup>207</sup> These figures make clear that Germany's collected waste substantially exceeds the European recycling capacity, thus defeating the purpose of the waste collecting and recycling scheme.<sup>208</sup>

The excess secondary raw material from the high recovery quotas and overzealous collection flooded the recycling market causing recyclable raw material prices to plummet.<sup>209</sup> It has become less ex-

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199. Protzman, *supra* note 146.

200. *Packaging Waste Shows Major Drop in 1993; Ministry Plans Revisions to Packaging Law*, 17 Int'l Env't Rep. (BNA) No. 2, 59 (Jan. 26, 1994).

201. Chase, *supra* note 185.

202. Kulik, *supra* note 187.

203. Chase, *supra* note 185. The numbers quoted are estimates made in 1992 for the year 1993.

204. Genillard, *supra* note 147.

205. *Id.* at 19.

206. *Id.*

207. U.K.: Department of the Environment—Tim Yeo to Challenge Germans on Plastics Recycling Glut, REUTER TEXTLINE, UK GOV'T PRESS RELEASES, Oct. 27, 1993, available in LEXIS, WORLD Library, TXPRIM File.

208. *More Government Intervention to Reduce Packaging Waste Expected, Industry Told*, 16 Int'l Env't Rep. (BNA) No. 6, 217 (Apr. 12, 1993).

209. Lucas Bergkamp & Gail N. Martiri, *Take-Back Schemes, Product Stan-*



pensive for European recyclers to buy German plastics and waste paper than to collect it themselves.<sup>210</sup> Member States have even alleged that recyclers have been paid to take German packaging waste.<sup>211</sup> This amounted to a government subsidy of plastic waste, paper, and glass,<sup>212</sup> which, in turn, undermined recycling program development in other Member Nations, and contributed to the closure of some European recycling plants.<sup>213</sup> For example, it is less expensive to import black polythene film used to cover farm silage from Germany than to collect the material from English farms. Consequently, the competition from subsidized German paper and paperboard has forced an estimated ten percent of English paper mills out of business.<sup>214</sup>

The DSD fully utilized the recycling capacity of many European nations, but the over-collection still left mountains of waste for which there was simply no market. As a result, excess waste from the German recycling program found its way into landfills.<sup>215</sup> The DSD organizers have conceded that some of the collected waste would simply be thrown away,<sup>216</sup> but problems have arisen as waste was discovered in foreign disposal sites. German packaging materials were reportedly found in France, Eastern Europe, and Southeast Asia.<sup>217</sup> For example, in 1992 plastic waste from Germany was found mixed with hospital waste in an illegal dump in

*dards and Eco-Taxes*, 17 Int'l Env't Rep. (BNA) No. 4, 192 (Feb. 23, 1994).

210. Rose & Perchard, *supra* note 182.

211. U.K.: *Department of the Environment—Tim Yeo to Challenge Germans on Plastics Recycling Glut*, *supra* note 207.

212. Demetrakakes, *supra* note 155.

213. See Genillard, *supra* note 173; Kulik, *supra* note 187.

214. Neville Nankivell, *EC Losing Waste-Line Battle*, FIN. POST, Aug. 18, 1993, at 37; see also Chris White, *German Rubbish Crisis Causes Pile of Troubles in EC*, FOOD & DRINK DAILY, May 5, 1993. Likewise, British tire recyclers are hampered by imports of tire crumbs subsidized by the German government. Reeds, *supra* note 181.

215. See U.K.: *Department of the Environment—Tim Yeo to Challenge Germans on Plastics Recycling Glut*, *supra* note 207; Genillard, *supra* note 147.

216. U.K.: *Department of the Environment—Tim Yeo to Challenge Germans on Plastics Recycling Glut*, *supra* note 207.

217. *Germany Rescues Ambitious Recycling Scheme From Scrapheap*, REUTER ASIA-PAC. BUS. REP., Nov. 8, 1993, available in LEXIS, NEWS Library, REUAPB File.

France.<sup>218</sup> Plastic waste was also delivered to Slovenia, Romania, and Hungary, to which Germany also reportedly exported toxic chemicals and pesticides.<sup>219</sup> In effect, Germany is merely exporting its waste problems.<sup>220</sup> The Ordinance allows waste to be classified as raw material and to be exported,<sup>221</sup> resulting in "more outbound shipments of waste from what is already the world's biggest waste exporter."<sup>222</sup>

Several Member States have criticized the exemption in the *Töpfer Law* as the source of the DSD debacle and its effects on the Common Market. Packaging and waste reduction continues to be a goal of the European Union, but the German law has destabilized the recycling market.<sup>223</sup> The Union has received complaints from France, Britain, Ireland, Spain, Italy, Luxembourg, and The Netherlands regarding the effects of exported German waste resulting from the packaging ordinance.<sup>224</sup>

In August of 1994, the European Commission instituted a legal action against Germany, charging that the legislation constituted an unacceptable barrier to trade.<sup>225</sup> The Commission hinted at the European Union's primary goal of establishing a single internal mar-

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218. *German Recycling—Waste Mix-up Stirs Debate*, REUTER TEXTLINE, CHEM. BUS. NEWS BASE, Nov. 6, 1992. At least nine trucks were caught in France illegally transporting syringes, bloodbags, and other hospital waste from Germany. *Bonn Set to Crack Down on Garbage Smuggling*, THE REUTER LIBRARY REP., Aug. 28, 1992. Greenpeace claims to have found thousands of tons of waste from the DSD in Indonesia and empty ships returning to Asia are said to be filled with German waste. Genillard, *supra* note 147, at 18.

219. *Bonn Set to Crack Down on Garbage Smuggling*, *supra* note 218. In the face of such accusations, DSD called for the investigation of waste disposal contractors and the German Technical Inspection Agency was created to verify sorting and recycling plants. Genillard, *supra* note 173, at 16.

220. *U.K.: Department of the Environment—Tim Yeo to Challenge Germans on Plastics Recycling Glut*, *supra* note 207.

221. Genillard, *supra* note 173, at 16.

222. *Commission Says No to Action Against German Waste Flows*, REUTER EUR. COMM. REP., June 29, 1993, available in LEXIS, NEWS Library, REUEC File.

223. *France Threatens Waste Import Ban*, FIN. TIMES, June 30, 1993, at P2.

224. *EU: Commission Opposes German Packaging Law*, REUTER TEXTLINE CHEM. BUS. NEWS BASE, Aug. 20, 1994.

225. *Commission to Take Germany to Court Over Packaging Law*, 17 Int'l Env't Rep. (BNA) No. 4, 158 (Mar. 1, 1994).

ket, with other concerns, such as environmental problems, bearing secondary importance. Under the Treaty of Rome, for instance, infringement proceedings may be brought against a Member State if the effects of a law, such as the Packaging Ordinance, are found to be incompatible with the single market objective of the E.U.<sup>226</sup>

The essential question, thus, is whether forced recycling of this magnitude actually improves the quality of the environment. Some recycling can have a negative ecological impact.<sup>227</sup> For example, in the recycling of plastics, a great deal of energy is required. Because so little raw material is ultimately recovered, plastic recycling may be ecologically and economically less viable than "down-cycling" through incineration.<sup>228</sup> It has been suggested that plastic is only recycled for political reasons.<sup>229</sup>

The German law's prohibition of incineration means that packaging material must be recycled regardless of cost. As a result, collecting packaging materials for recycling where the infrastructure does not exist creates above-ground landfills.<sup>230</sup> Waste collected for recycling where there is insufficient capacity to recycle it, is ultimately still waste.

The lack of investment in the recycling industry, however, is fundamentally solvable if the government and industry worked together to develop the resources necessary to meet the Ordinance's requirements. Technology-forcing regulations have proven successful,<sup>231</sup> and the Ordinance has already prompted the development of new recycling technology.<sup>232</sup>

226. Genillard, *supra* note 173, at 16.

227. Reynolds, *supra* note 192, at 345.

228. Genillard, *supra* note 147, at 8.

229. Genillard, *supra* note 173, at 6.

230. *More Government Intervention to Reduce Packaging Waste Expected, Industry Told*, *supra* note 208, at 217.

231. The American air pollution control laws were designed to require the development of new technologies. The regulations successfully forced the creation of emissions control equipment. For an expanded discussion on technology forcing regulations, see ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY, *supra* note 12, at 165-68.

232. For example, RWE, a German utilities company, has invested DM 10 million in a pilot plant to separate aluminum from polyethylene in beverage cartons and a coal and energy producer are working together to recycle plastic by melting the material and using the resulting oil in a refinery. Genillard, *supra*

Critics have dismissed the concept of a circulatory economy for a variety of reasons. In addition to criticizing the concept as a "utopian dream," opponents have also attacked the German government for viewing waste management far too narrowly, for example, by not allowing incineration to supplement their recycling capabilities.<sup>233</sup> The alternative to the take-back scheme or deposit and return system for packaging materials, "zero packaging," has been called "naively simplistic."<sup>234</sup> But Germany's bold legislation has actually reduced the amount of packaging materials going to German landfills.

Packaging waste in Germany declined approximately a half-million tons to 11.8 million tons in 1993 from the previous year.<sup>235</sup> Environmental Minister Klaus Töpfer called this statistic "proof that the packaging ordinance is reducing waste substantially despite claims to the [contrary]."<sup>236</sup> Although the government estimated that one million fewer tons of packaging waste have ended up in German landfills since the law was passed in 1991, one must wonder how much of that packaging found its way into disposal sites in other countries.

#### D. Packaging Regulations in Other E.U. Member Countries

##### 1. The French Packaging Decree

France was the second European country to pass legislation regulating packaging waste.<sup>237</sup> The Decree Regarding Waste Resulting From The Abandonment Of Packaging became effective January 1, 1993.<sup>238</sup> It applies to packaging materials used on consumer goods

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note 79, at 20. Recycled plastic granules are also being tested for use in lieu of oil in the iron-ore oxidation process in steelmaking by several German companies. *Environment Ministry, Paper Producers Reach an Accord on Voluntary Recycling Scheme*, 17 Int'l Env't Rep. (BNA) No. 21, 856 (Oct. 19, 1994).

233. Protzman, *supra* note 146, at 8.

234. Kulik, *supra* note 187.

235. *Packaging Waste Shows Major Drop in 1993; Ministry Plans Revisions to Packaging Law*, *supra* note 200.

236. *Id.*

237. Demetrakakes, *supra* note 155.

238. Decree number 92-377 of Apr. 1, 1992, which modified France's 1975 law, 75-633 on the elimination of waste [hereinafter Decree]. See Demetrakakes,

and merchandising and material designed for shipping or displaying a product. Under the Decree, packaging manufacturers and importers must recover waste from products placed on the French market. Thus, the French system is based on the principal of producer responsibility similar to the German law.<sup>239</sup> The goal of the Decree is to recover 60% of the glass packaging and 50% of the steel, aluminum, paper, and plastic materials by 1997. By 2002, the goal is to recover 75% of all recyclable packaging materials.<sup>240</sup> The phrase "waste recovery" is used rather than "recycling" because the Decree allows incineration with energy recuperation to constitute waste recovery.

Unlike the German system which does not allow incineration, French companies are able to determine the waste most suitable for recycling on both an economic and an ecological basis and incinerate the non-recycled waste.<sup>241</sup> This system minimizes the German imbalance between material collected and recycling capacity.<sup>242</sup>

The obligations imposed by the Decree may be met by a company recovering its own waste through a deposit and return system or through organizing collection and disposal of waste at a government approved site or participating in a waste management system certified by the French government.<sup>243</sup> As in the German system, the government certified organization would be responsible for recovering packaging waste.<sup>244</sup> Under the French system, however, local governments are responsible for collecting and sorting the waste.<sup>245</sup> The organization is then responsible for reimbursing the

*supra* note 155.

239. *Creation of Recovery Organization Announced by French Plastic Manufacturer*, 16 Int'l Env't Rep. (BNA) No. 6, 208 (Mar. 26, 1993).

240. Decree, *supra* note 238.

241. Valorplast, a recovery organization for the plastics manufacturing industry, focuses recycling efforts on plastics of sufficient weight made of homogeneous materials to make recycling economically and ecologically efficient. The waste that is too small or light to be recycled is incinerated. *See Creation of Recovery Organization Announced by French Plastic Manufacturers*, *supra* note 239.

242. Rose & Perchard, *supra* note 182.

243. *France—Environmental Packaging Regs, Market Reports*, 1994 NAT'L TRADE DATA BANK, Mar. 17, 1994.

244. Rose & Perchard, *supra* note 182.

245. Demetrakakes, *supra* note 155.

local communities for sorting the waste.<sup>246</sup> This system eliminates the charge of service repetition aimed at the DSD for duplicating the municipal waste collection system.

Eco-Emballage is the private organization set up by numerous French businesses to meet the requirements of the Packaging Decree.<sup>247</sup> The organization is modeled after Germany's *Duales System Deutschland* and is responsible for recovering waste that is collected and sorted by local officials.<sup>248</sup> Eco-Emballage also finances recycling research programs and local waste recovery operations.

Eco-Emballage users must pay an initial membership fee of 50,000 *franc* (approximately \$8,600) and a fee of one *centime* (about two cents) per package.<sup>249</sup> This per-package fee is expected to increase to three *centimes* in the near future. The fee allows members to use the Green Dot logo on their packaging. In 1992, Eco-Emballage and the *Duales System Deutschland* agreed to use the Green Dot as a common logo for identifying recoverable material.

## 2. The Dutch Packaging Covenant

The Dutch government's approach to packaging waste differs from the German and French approach in one respect. Instead of enacting legislation, the government sought to make voluntary covenants with industry to recover and recycle packaging waste. Packaging waste comprises twenty percent of the weight and up to fifty percent of the volume of Dutch municipal waste.<sup>250</sup> To reduce the amount of waste, the Dutch government seeks first and foremost to reduce the amount of material used in packaging which ultimately becomes packaging waste. The government has negotiat-

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246. *Id.*

247. Eco-Emballage was the first company to receive certification for the collection of consumer packaging materials. By the end of 1993, three more firms had received certification: Adelphe for glass, Valorplast for plastics, and Cyclamed for pharmaceutical packaging materials. *Id.*

248. Demetrakakes, *supra* note 155.

249. *France—Environmental Packaging Regs, Market Reports*, *supra* note 243.

250. *Packaging Industry, Environment Ministry Reach Accord on Waste Reduction, Recycling*, 14 Int'l Env't Rep. (BNA) No. 10, 277, 277 (May 22, 1991).

ed agreements with different sectors of the packaging industry to motivate the parties to reduce waste.<sup>251</sup>

On June 6, 1991, the Covenant was signed by Hans Alders, the former Dutch Minister of the Environment, and Rudi Mulder, the director of the *Stichting Verpakking en Milieu*, the Dutch Foundation for Packaging and the Environment. It aimed to reduce the use of packaging materials through required recycling by the year 2000.<sup>252</sup> The goals of the agreement are to develop new concepts in product packaging and new material technology, and to avoid excess packaging.<sup>253</sup>

Voluntary agreements with industry on environmental issues have been used for years by the Dutch government as a form of regulation.<sup>254</sup> These agreements or covenants serve to supplement policy; they are not considered a substitute for regulation.<sup>255</sup>

Covenants with industry aimed at implementing governmental policy prepared at the national level are often referred to as general legislative covenants.<sup>256</sup> These covenants are used in four situations: (1) when policy objectives cannot be quickly or easily achieved through regulation; (2) when progress toward achieving a law's objectives can be made through voluntary action before the law's adoption; (3) to impose a regulation's requirements on an industry before it is actually enacted; and (4) to supplement or

251. *Dutch Environment Minister Disappointed at Parliament's Packaging Directive Targets*, 17 Int'l Env't Rep. (BNA) No. 10, 417, 418 (May 18, 1994).

252. *Dutch Packagers Expect Much Progress in 1990s Toward Reducing Packaging Waste*, 14 Int'l Env't Rep. (BNA) No. 13, 372, 372 (July 3, 1991). The Foundation for Packaging and the Environment represents a substantial part of Dutch Industries. *European Packaging Laws: Take-back Schemes, Product Standards, and Eco-taxes*, *supra* note 163, at 194.

253. The Packaging Covenant ["Covenant"], The Hague, § 2.2, Quantitative Prevention, art. 5 (June 6, 1991)(on file with the *Fordham Environmental Law Journal*).

254. *Some Early Progress Seen Under Covenant on Packaging Waste*, Dutch Commission Says, 16 Int'l Env't Rep. (BNA) No. 21, 772 (Oct. 20, 1993).

255. Lucas Bergkamp, *Dutch Environmental Law: An Overview of Recent Trends*, 16 Int'l Env't Rep. (BNA) No. 4, 144 (Feb. 24, 1993).

256. Agreements between regional and local authorities and specific companies are called specific "compliance" covenants regulating facilities or certain practices. *Id.*

strengthen existing regulation.<sup>257</sup>

Recently, however, the enforceability of such agreements has been questioned. Although the Covenant "is a contract which has the force of a civil law agreement,"<sup>258</sup> it is only binding on those parties that have signed the agreement personally or through an authorized agent.<sup>259</sup> Also, only those provisions of the Covenant that are sufficiently concrete and clearly identify the company as the obligor are likely to be enforceable.<sup>260</sup> Therefore, there is some question as to which provisions can actually be enforced.

When a company becomes a party to a covenant, it is obligated to contribute toward achieving its goals.<sup>261</sup> The government also has obligations under the Packaging Covenant.<sup>262</sup> The Minister of the Environment must establish sufficient incineration facilities and landfill alternatives as well as provide a selective collection framework to allow participating companies to meet the established goals.<sup>263</sup>

The Dutch Packaging Covenant imposes a "standstill" obligation, requiring that the total volume of new packaging put into the market stream not increase. The agreement aims to reduce the volume of packaging material by the year 2000 to ten percent below the 1986 level.<sup>264</sup> The Covenant also requires that ninety percent of non-reusable packaging materials must be taken back if selectively collected, and sixty percent of taken back material must be recy-

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257. *Id.*

258. *Doubts Expressed About Legality of Voluntary Pacts on Environment*, 14 Int'l Env't Rep. (BNA) No. 25, 681 (Dec. 18, 1991).

259. Smith & Bergkamp, *supra* note 157, at 527.

260. *Id.* at 526. The so-called "declarations of intent" provide examples of unenforceable provisions of the Packaging Covenant. Some are vague as they do not identify the obligor and are often not intended to be enforceable obligations. *Id.* at 527.

261. *Id.* at 526.

262. *Id.* at 528-29.

263. *Id.* at 529.

264. Covenant, *supra* note 253, at § 2.2, art. 4. "Packaging" is defined as "the end product of the packaging industry destined for the packaging of products or goods." *Id.* § 1, art. I. Under this definition, the 1986 volume of packaging put into circulation was two million tons. *European Packaging Laws: Take-back Schemes, Product Standards, and Eco-taxes*, *supra* note 163.



cled.<sup>265</sup> Although the Dutch Packaging Covenant allows incineration for energy recovery, the agreement limits the amount that may be incinerated to forty percent, and landfilling is prohibited.<sup>266</sup>

Intermediate targets have also been set. Parties to the agreement are committed to holding the 1994 volume of packaging produced to the 1991 level.<sup>267</sup> By 1997, the packaging industry is required to reduce its production volume to ten percent below the 1991 level.<sup>268</sup> In addition, the agreement requires manufacturers to reduce the quantity of material used in packaging and limit the use of materials that cannot be reused or are difficult to recycle.<sup>269</sup> It also mandates product re-use and material recycling, and lists some specific measures to be taken.<sup>270</sup> For example, lead tops are no longer to be used on bottles, and inks containing heavy metals are to be replaced with less environmentally harmful substances.<sup>271</sup>

The Covenant has provisions for evaluating the agreement regularly between its 1991 implementation and its target achievement date in the year 2000.<sup>272</sup> A commission was created to review the agreement's implementation and compliance.<sup>273</sup> The commission has five members, two appointed by the Environment Ministry, two appointed by the Foundation for Packaging and the Environment, and one independent chairperson.<sup>274</sup> The Commission prepares annual reports on the progress made in achieving the Covenant's goals.<sup>275</sup> It evaluated the agreement in 1994, and will do so again in 1997.<sup>276</sup>

265. Covenant, *supra* note 253, at § 2.5, Art. 10(4) & (5).

266. Smith & Bergkamp, *supra* note 157, at 10.

267. *Some Early Progress Seen Under Covenant on Packaging Waste*, Dutch Commission Says, *supra* note 254.

268. Covenant, *supra* note 253, at § 2.2, Art. 4(4).

269. *Id.* at § 2.3, 2.4 and 2.5.

270. *Id.* at §§ 2.3-2.5.

271. *Id.* at § 2.3 Art. 7(1).

272. Smith & Bergkamp, *supra* note 157, at 526.

273. *Id.*

274. *Environment Ministers Sets [sic] Up Commission to Coordinate New Packaging Waste Effort*, 14 Int'l Env't Rep. (BNA) No. 22, 605 (Nov. 6, 1991).

275. *Id.*

276. *Dutch Packagers Expect Much Progress in 1990's Toward Reducing Packaging Waste*, *supra* note 252. In its second annual report, the Commission recommended that advisory agencies and other groups that are not parties to the

The Commission also reviews implementation plans submitted by the Foundation for Packaging and the Environment.<sup>277</sup> Each sector of the packaging industry is required to prepare an annual implementation plan,<sup>278</sup> based on plans submitted by the businesses party to the agreement.<sup>279</sup> The Commission is required to examine the implementation plans to "ensure they meet the goals of the Packaging Covenant."<sup>280</sup>

In its earliest reports, the Commission found that companies were "taking steps to meet the requirements of [the] Packaging Covenant," but most actions have been "directed at the quantity of packaging waste, rather than its quality."<sup>281</sup> Favorable marks were also given to industry's efforts to increase re-useable packaging, and to the growing number of companies party to the agreement.<sup>282</sup>

Compliance with packaging-use obligations is monitored both on the input side and on the output side.<sup>283</sup> On the input side, the amount of packaging added to products is monitored.<sup>284</sup> On the output side, the volume of packaging found in the waste stream is watched.<sup>285</sup> The remedies for breach of these obligations are normal contractual remedies, such as damages and injunctive relief.<sup>286</sup>

The larger problem with the Dutch Packaging Covenant is not that the parties to the Covenant are breaching their obligations, but

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Covenant like environmental groups be involved in the negotiation of Covenants. *Policy of Negotiating Environmental Pacts with Industry to Continue, Government Says*, 17 Int'l Env't Rep. (BNA) No. 6, 274 (Mar. 23, 1994).

277. See Smith & Bergkamp, *supra* note 157, at 526.

278. *Dutch Packagers Expect Much Progress in 1990's Toward Reducing Packaging Waste*, *supra* note 252.

279. *Environment Ministers Sets [sic] Up Commission to Coordinate New Packaging Waste Effort*, *supra* note 274.

280. *Id.*

281. *Some Early Progress Seen Under Covenant on Packaging Waste, Dutch Commission Says*, *supra* note 254.

282. Bergkamp & Martiri, *supra* note 209, at 194.

283. *Some Early Progress Seen Under Covenant on Packaging Waste, Dutch Commission Says*, *supra* note 254.

284. *Id.*

285. *Id.*

286. Any dispute arising from the covenant is subject to arbitration by the agreement's terms. See Smith & Bergkamp, *supra* note 157.

that some companies are not joining. Those "free-rider" companies have not joined the "Foundation for Packaging and the Environment" and have not signed the agreement individually. They benefit from the avoided or delayed legislation due to the Covenants, while they are not obligated to reduce packaging waste.<sup>287</sup>

Free-riding companies account for approximately ten percent of the volume of packaging on the Dutch market.<sup>288</sup> Although these companies are not obliged to take back packaging waste, distributors and retailers that are party to the agreement have an incentive to refuse to distribute and sell products of manufacturers that are not bound by the Packaging Covenant.<sup>289</sup> Ultimately, legislation, such as the Packaging Covenant, must be enacted to fulfill The Netherlands' obligation to comply with the European Directive, in order to eliminate the problem of free-ridership.

#### *E. European Union Directive*

The E.U. Directive on Packaging and Packaging Waste was finally adopted by a qualified majority of the European Council on December 14, 1994.<sup>290</sup> It was published in the Official Journal on December 31, 1994. The Directive, which was originally proposed by the European Commission on July 15, 1992, has been described in the media "as the most heavily-lobbied dossier in the history of the European institutions."<sup>291</sup> In the debate before the Directive's passage, Germany and Denmark argued for high recovery and recycling targets and voted against the Directive, along with The Netherlands, due to these limited targets.<sup>292</sup> Other countries, including

287. Bergkamp, *supra* note 255, at 148.

288. *See id.*

289. *See id.*

290. Council Directive 94/62, *supra* note 1.

291. *Environment: Packaging Waste Directive Finally Adopted*, EUR. ENERGY, No. 437, Dec 23, 1994. Also, an article in the FINANCIAL TIMES quotes Peter Davis, chief executive of the UK's Industry Council for Packaging and the Environment as calling the Directive, "one of the most hotly lobbied pieces of European legislation devised." Haig Simonian, *Business and the Environment: Packaging Issue Tied in Knots—An EU Directive is Proving Divisive*, FIN. TIMES, Jan. 11, 1995, at 18.

292. Simonian, *supra* note 291.

the United Kingdom, sought lower target rates.<sup>293</sup>

The passage of the Directive marks the first time that the Parliament and Council co-decision process was successfully used on an environmental issue. A Common Position on Packaging and Packaging Waste was formally adopted by the Council on March 4, 1994.<sup>294</sup> The European Parliament had its second reading on May 5, 1994, and on May 25, the Commission incorporated the amendments proposed by the Parliament.<sup>295</sup> Germany, Denmark, and The Netherlands opposed the leniency of the Directive throughout the debate.<sup>296</sup> By joining the dissenters on June 9, 1994, Belgium blocked the adoption of the Directive by a qualified majority. However, an agreement was reached by the Conciliation Committee on November 8, 1994, setting the stage for the final passage of the embattled law.<sup>297</sup>

The Directive's stated objective is to harmonize national laws regarding packaging and packaging waste to provide a high level of environmental protection and to ensure the minimization of trade obstacles resulting from individual national laws on packaging waste.<sup>298</sup> It applies to "all packaging placed on the market in the Community and all packaging waste, whether it is used or released at industrial, commercial, office, shop, service, household or any other level regardless of the material used."<sup>299</sup>

The Directive requires Member States to adopt measures to ensure the prevention of packaging waste and allows, but does not require, the adoption of measures to encourage the reuse of packaging materials.<sup>300</sup> The Directive also requires states to pass legislation aimed at attaining the target levels of recycling designated in the Directive.<sup>301</sup>

Article 6 of the Directive requires that, within five years of the

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293. *Id.*

294. *Council of Ministers Press Release*, RAPID, Dec. 15, 1994.

295. *Id.*

296. *Id.*

297. *Id.*

298. Council Directive, *supra* note 1, art. 1, O.J. L 365/10, at 12.

299. *Id.* art. 2, O.J. L 365/10, at 12.

300. *Id.* art. 4-5, O.J. L 365/10, at 13.

301. *Id.* art. 6, O.J. L 365/10, at 13-14.

implementation date of the Directive, between 50% and 65% of packaging waste by weight be recovered, and between 25% and 45% of materials contained in packaging waste be recycled, with a minimum of 15% by weight for each material.<sup>302</sup> The range of the targets reflect the compromise that was required between the Member States to pass the legislation. The Directive also requires that within ten years of the Directive's implementation date, a substantially increased target for recovery and recycling, as determined by the Council, be established.<sup>303</sup>

Article 7 provides for the development of a return, collection, and recovery system.<sup>304</sup> Each State is given the latitude to create a framework compatible with the nation's existing waste management system.<sup>305</sup> One commentator, however, has stated that few will pursue the German approach of a duplicate waste collection system.<sup>306</sup>

The Directive also provides for the preparation of a packaging identification system and the promotion of standards relating to packaging content, recycling methods, and life-cycle analysis.<sup>307</sup> Member States are required to create databases on the magnitude, characteristics, and evolution of packaging and packaging waste flows.<sup>308</sup> Measures must also be taken to provide information on packaging and packaging waste to consumers.<sup>309</sup>

Limitations on a Member State's ability to control packaging and packaging waste are found in Articles 6 and 18. Article 18 prohibits the Member States from impeding the movement of goods that meet the requirements of the Directive throughout the Community.<sup>310</sup> Article 6 requires that any Member State having or developing programs with targets higher than the Directive's requirements must inform the Commission.<sup>311</sup> Higher standards are only permit-

302. *Id.* art. 6, O.J. L 365/10, at 14.

303. *Id.*

304. *Id.* art. 7, O.J. L 365/10, at 14.

305. *Id.*

306. *European Rubbish; Tied up in Knots*, *ECONOMIST*, Jan. 28, 1995, at 62.

307. Council Directive 94/62, *supra* note 1, art. 12, O.J. L 365/10, at 16.

308. *Id.*

309. *Id.* art. 13, O.J. L 365/10, at 16.

310. *Id.* art. 18, O.J. L 365/10, at 17.

311. *Id.* art. 6, O.J. L 365/10, at 14.

ted if the "measures avoid distortions of the internal market and do not hinder compliance by other Member States with the Directive."<sup>312</sup> This means that those Member States wishing to maintain higher recovery and recycling targets must have sufficient recycling capacity within the State's own territory to process the larger quantities of material.<sup>313</sup> Given current German standards, which establish recovery and recycling targets that far exceed recycling capacity, this is a critical requirement.<sup>314</sup>

The German Environment Minister claimed the Directive's targets were not high enough to provide an incentive to develop recycling capabilities and comprehensive waste management systems.<sup>315</sup> Denmark, The Netherlands, and Germany voted against the Directive for not being ambitious enough. Others have negatively commented on the Directive's lack of agreement on a common form of marking or labeling.<sup>316</sup> Annex I to the Directive details a numeric identification system.<sup>317</sup> However, Article 8, which relates to marking and identification systems, merely provides that the Council will decide on package marking within two years of the Directive's effective date.<sup>318</sup> The Member States that presently have packaging waste legislation and those States that pass legis-

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312. *Id.*

313. The Directive states that "Member States which have, or will, set programmes going beyond the targets of paragraph 1(a) and (b) and which provide to this effect appropriate capacities for recycling and recovery, are permitted to pursue those targets in the interest of a high level of environmental protection, on the condition that these measures avoid distortions of the internal market and do not hinder compliance by other Member States with the Directive." *Id.* This has been interpreted by several commentators to require the domestic technological capability to recycle the increased amount of waste provided for by the higher standards. See *Packaging Waste: Directive No More Than a Stage, Claims Leading European Specialist*, EUROP. ENV'T, Jan 10, 1995; *EU: Industry Delight at EU Packaging Agreement*, CHEM. BUS. NEWS BASE (REUTERS), Feb. 11, 1995.

314. For a discussion of German recycling capacity for specific materials, see FISHBEIN, *supra* note 193, at 55-58.

315. *Federal Government to Amend Targets Set Under Recycling Ordinance, Ministry Says*, 18 Int'l Env't Rep. (BNA) No. 4, 140 (Feb. 22, 1995).

316. *Packaging Waste: Directive No More Than a Stage, Claims Leading European Specialist*, *supra* note 313.

317. Council Directive 94/62, *supra* note 1, at Annex I.

318. *Id.* art. 8.

lation in response to the Directive will potentially have either different package markings or similar markings with varying meanings.<sup>319</sup>

The Member States have until June 30, 1996, to implement national legislation that complies with the requirements of the Directive and five years to meet the Directive's obligations.<sup>320</sup> Germany will be forced to down-grade its recovery and recycling targets unless it develops the domestic recycling capacity to process the collected waste within the Directive's five year time frame. If the German government cannot prove to the Commission that its legislation will not adversely impact the environment and other Member States' ability to fulfill their obligations under the Directive, Germany will be obligated to amend its Ordinance.

The French Decree, like the German Ordinance, has recovery rates that are higher than the levels adopted in the Directive. However, unlike the German Ordinance, the Decree's target rates are only slightly above the maximum level established by the Council.<sup>321</sup> The French Decree's lower rates and its authorization of incineration make it likely that the Commission will find that the Decree complies with the Directive's requirements.

The Dutch Covenant, however, must be written into law for the Dutch government to be in compliance with the Directive.<sup>322</sup> Legislation must be adopted that applies to all packaging and packaging waste placed on the Dutch market before the 1996 compliance date.<sup>323</sup> The recovery rates in the Covenant, like the German levels, are substantially higher than levels adopted at the Community level.<sup>324</sup> The Covenant's authorization of incineration of a percent-

319. *Packaging Waste: Directive No More Than a Stage, Claims Leading European Specialist*, *supra* note 313. Packaging specialist Jean-Pierre Hannequart provides the example of Belgium where Green Dots from Germany and France and Fost Plus initials all have different obligations associated with the labels. *Id.*

320. Article 22, paragraph 1 sets the implementation date for national laws. Council Directive 94/62, *supra* note 1, at art. 22, para. 1, O.J. L 365/10, at 17. Article 6, paragraph 1, section (a) sets the time frame for the recovery and recycling standards to be met. *Id.* at art. 6, para. 1.

321. *See* Smith & Bergkamp, *supra* note 157.

322. *See id.*

323. *See id.*

324. *See id.*

age of the waste recovered may, however, minimize the impact on other Member States.

Additionally, the remaining Members of the European Union that have no such legislation will be required to adopt laws mandating the recovery and recycling of packaging waste. With all fifteen Member States regulating packaging waste, less waste will be produced as manufacturers eliminate unnecessary packaging material. Consequently, a smaller percentage of the packaging material that remains waste will be sent to landfills as the recycling targets are met.

### CONCLUSION

The European Packaging Directive will result in less waste and, perhaps, in a better environment throughout the Union. Within the coming year, the Member Countries that have yet to regulate packaging waste will be forced to adopt legislation to comply with the Directive. Ideally, by 1996, there will be fifteen countries with recovery and recycling legislation, as opposed to the current three.

Germany is no longer the exclusive packaging waste regulator and soon will be merely one of many. In light of the new Directive, the German government will either have to find a way to make the existing Ordinance work without disrupting the European market or will be forced to lower its standards to the Directive's level. Either way, the end result will remain the same: less packaging waste going to landfills, but not at the expense of environmental quality in countries throughout the E.U. and Eastern Europe.

The imposition of less stringent national standards by a regional or international regime can, in some cases, actually foster improved environmental quality. By forcing nations with particularly stringent standards to relax them, the regional or international regime reduces the incentive of economic actors to export pollution rather than bear the high costs of the stringent national standards.

It can be argued that it is not the stringency of Germany's standards that creates the export problem, but the combination of lax enforcement of waste export restrictions combined with lax waste standards in receiving countries. However, there are technical limits to Germany's ability to recycle its own waste. It is the high German recycling targets combined with a lack of domestic technical capacity that has created the incentive to export in this situation.



The incentive to export created by Germany's lack of technical capacity is the reason that the European Union Directive's limitation on maintaining higher standards does not unjustly restrict Germany's sovereign right to determine its own level of environmental quality. If Germany can prove it has developed the technical capacity to recycle the waste that its Ordinance requires, the government may retain its high standards. If not, the incentive to export the waste problem remains, and Germany must forego its higher targets for the regional standards set by the Directive.

Packaging waste regulation may be atypical of the traditional transboundary pollutants in that waste and its pollution are easily exported. Other pollutants, such as air pollution or water pollution, are not as easily exported. The creation of air pollution degrades all air quality, so that any local or regional reduction in air pollutant emissions is an asset to the region. Therefore, even very strict national standards will not have any additional adverse impact on environmental quality. However, packaging waste can be created nationally and exported, thus improving the quality of the environment in one state while working to degrade the environment in another.

As previous American and European experiences have shown, federalization of environmental laws can ultimately result in improved regional environmental quality. Strict national standards on transboundary pollutants, such as air pollution and water pollution, are warranted. However, environmental quality can also be improved when more stringent national standards that create economic, political, or technical incentives to export pollution problems are replaced with legislation that removes such incentives.

This same analysis can apply in other federal, regional, or international regimes such as NAFTA or GATT (now the World Trade Organization). All national environmental standards, however stringent, can be valid so long as they are economically and technologically capable of being attained. If, however, they create substantial incentives to export pollution problems, they can be viewed as barriers to trade.

Whether or not Germany is forced to lower its recycling targets remains to be seen. However, the country will likely see the tangible benefits of the Directive within its own borders and, unquestionably, throughout the European region.