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THE ENVIRONMENTAL LAW SYSTEM OF THE FEDERAL REPUBLIC OF GERMANY*

MONIKA T. NEUMANN**

I. INTRODUCTION

This paper presents a general overview of German environmental law, its principles, and its implementation. It briefly touches on the cultural and historical contexts in which this field of law evolved, as well as on its underlying policy. Being located in the center of Europe, Germany is tied into several systems of international relationships - regional, European, and global - that have to be examined with regard to their impact on German environmental law. Within the scope of this paper, the complex system of the legal obligations produced by these international relationships and German environmental law itself, consisting as it does of an agglomeration of very specific laws, can be considered only with regard to their essential features.

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II. OVERVIEW

A. LEGAL AND CULTURAL TRADITION IN THE CONTEXT OF THE POLITICAL SYSTEM

In contrast to environmental legislation as such, which for the most part has been adopted only during the past three decades, there have traditionally been several bodies of German law which in fact regulated environmental matters, though without being considered environmental law by the general public. These earlier laws pertained to such subjects as hunting, fishing, water, land use, and forest management, and were directed more toward economic, rather than ecological or environmental considerations. Shifting public awareness from exclusively economic to additionally ecological concerns compelled a review of these earlier statutes and their modification or amendment. The different origins and orientations of statutes dealing with environmental matters may be the main reasons there is still no comprehensive codification of the German environmental law system, even though the project has already been worked on for several years.

Germany is what is called a “civil law country.” Its law, rooted in that of the Germanic tribes as well as in the Roman law, consists mostly of codified statutory law, which was modernized and systematized in large parts toward the end of the last century, essentially following the post-revolutionary evolution of French law.

As its name indicates, Germany is today a federal republic. The legislative power is shared between the Federation and the federal states, which since 1919 have been called Länder. The system of shared legislative power is established by the “Basic Law,” Grundgesetz (GG), the German constitution, promulgated on May 23, 1949,¹ which has governed the legal and political system of the Federal Republic of Germany since that time.

¹. See Grundgesetz (GG) (Federal Constitution) BGBl., p.1.
Like all German legislation, environmental laws have to be in accord with the language and substantive content of the Basic Law. To understand Germany's federal legal tradition, one has to keep in mind that Germany, as a nation state, has been in existence only since 1871, the date of the founding of the “German Empire.” It was established by the joining of the southern German states to the “North German Confederation” at the conclusion of the war against France. At the time, the German Empire was a dynastic, semi-constitutional federation of rulers of the German principalities. Two legislative chambers were formed, one upper house, the Bundesrat, and one lower house, the Reichstag. However, the political system could not be considered democratic, because the government was not responsible to the Reichstag, which had rather restricted responsibilities and to which suffrage was limited. Though broad areas of civil and criminal law were newly codified and made applicable to the whole country, the constituent states held most of the administrative and fiscal power. That pattern basically continues to the present day.

After World War I, the “Weimar Republic,” the first truly democratic state in Germany, was established; its constitution established a decentralized unitary state, with the former states from then on called Länder and functioning as self-administrative units.

Democracy as well as self-administration of the Länder were destroyed during those 12 dark years of the Nazi dictatorship under Hitler from 1933 to 1945.

After World War II, democracy was reconstituted, supported by the Allies which had divided the country into four zones governed by their military forces. The process of democratization occurred in a “bottom-to-top process,” first on the local level.

2. Wolfgang Renzsch, German Federalism in Historical Perspective: Federalism as a Substitute for a National State, 19 PUBLIUS, THE JOURNAL OF FEDERALISM, Fall 1989, No. 4, at 20. [hereinafter Renzsch].
3. Id. at 21.
4. Id. at 20.
5. Id. at 23.
6. FACTS ABOUT GERMANY 100 (Information Brochure by the German Government) (Frankfurt/Main: Societäts Verlag 1993) (hereinafter FACTS ABOUT GERM-
level, later on the regional or Länderelevel. In 1948, the Western Allies proposed to the Prime Ministers of the Ländereof the three Western Zones to form a central state. A commission was appointed to draft a constitution. That constitution, when completed, was called the “Basic Law,” indicating its provisional character in the divided country. Though the Basic Law had to be approved by the Western Allies, who could thus influence its content, it was decisively shaped by the interests of the Ländereand established an equilibrium of powers between them and the Federation.

There are two legislative chambers, the Bundestag, elected directly by the people, and the Bundesrat, representing the governments of the Ländere. Both chambers have to cooperate for legislation. The Basic Law gives the Bundesrat a much stronger position than the corresponding Reichstag was given by the Weimar Constitution.

The right to elect the Federal Chancellor is vested in the members of the Bundestag, (Article 63 GG); the Federal Chancellor functions as the head of government, (Article 65 GG), and proposes the ministers, who are appointed or dismissed by the Federal President (Article 64 GG).

With the Länderebeing constitutionally responsible for the implementation of federal statutes, (Article 83 GG), and with the requirement of consent of the Bundesrat to legislation proposed by the Bundestag, (Articles 77 and 78 GG), the Basic Law provides for a power-sharing distribution of responsibilities that can be considered one of the foundation pillars of the federal system, a safeguard against any threat to freedom and democracy.

After the collapse of the communist government in the former German Democratic Republic and the reunification of the two parts of Germany under the legal and political system

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8. Id. at 22, 32.
9. Id. at 33.
10. FACTS ABOUT GERMANY, supra note 6, at 149-150.
of the Federal Republic in 1990, 16 Länder are now the constituents of the Federal Republic of Germany. The federal system is unchangeably established under Articles 20 I and 79 III (GG). Article 28 (GG) provides for the application of the same constitutional guarantees of the Basic Law to the constitutions of the Länders; the right to self-government under the democratic provisions of Article 20 II (GG) is guaranteed for the local authorities, counties, and municipalities.

Besides the two key principles of federalism and democracy, the Basic Law established a third and equally important principle. That is the principle of the social welfare state governed by the rule of law, Articles 20 I and 20 III (GG). Under these provisions the state has the obligation to create a fair social order, to prevent social imbalances and to provide for legal certainty and justice. One of the basic means to secure those objectives is the classical concept of the division of state authority into legislative, executive, and judicial powers. This concept, rooted in the doctrines of Locke and Montesquieu, is established in Article 20 II (GG).

The sharing of legislative power between Federation and Länders is regulated under Articles 70-75 (GG). Article 70 (GG) allocates the legislative power to the Länders unless it is vested in the Federation by the Basic Law. The borderline between those jurisdictions is to be drawn in conformity with the Basic Law's provisions on exclusive and concurring legislative powers.

Article 71 (GG) provides that in matters of the exclusive legislative power of the Federation, the Länders have legislative power only to the extent it is vested in them by federal act. Article 72 (GG) gives a definition of the term "concurrent legislative power," pointing out that in those matters the Länders shall have legislative power only to the extent to which the Federation did not exercise its legislative power. Articles 73 and 74 (GG) provide catalogues on matters of exclusive and

12. Id. at 5.
concurrent legislative power. Most environmental issues are listed in the category of concurrent legislative power.

Furthermore, Article 75 (GG) grants the Federation the right to pass framework legislation. Some of the environmental issues, such as nature preservation, regional planning, and water laws, can be found in this category. Federal framework laws have to be filled by Länder legislation. They have to be clear in respect to their legislative objectives; they can even provide for detailed regulation but have to leave substantial and essential parts of legislation to the Länder. The Länder do not have a mandatory obligation to provide for the filling of the framework act, but if they do, they must stay within the parameters set by the federal legislator.

Under Article 83 (GG), the Länder have to implement federal law in their own areas of responsibility, unless the Basic Law itself provides for federal implementation, which is a rare exception. The transboundary aspect in implementation of federal environmental law on the Länder level often leads to intergovernmental cooperation that tends to contribute to the strengthening of ecological positions in the political process.

B. THE JUDICIAL SYSTEM - ADMINISTRATIVE JURISDICTION

Despite the country's federal tradition, and in contrast to the dual court system in the United States, the judicial system in Germany is a unitary one, in which judicial power is shared between the Federation and the Länder. Besides the constitutional jurisdiction of the Federation and Länder, there are five independent branches of jurisdiction, each headed by a federal court. This court decides appellate cases coming from local or regional courts, which are managed under the responsibility of the Länder. The five branches of jurisdiction are:

13. THEODOR MAUNZ, ET AL., GRUNDFESETZ KOMMENTAR, Art. 75, Rdn. 11 (München: Beck, looseleaf) [hereinafter MAUNZ]. The citation Rdn. refers to Randnummer which is a locator in the German system of citation.
14. Id. at Rdn. 12.
15. Id. at Rdn. 18.
17. HEYDE, supra note 11, at 7.
1. Ordinary jurisdiction, dealing with civil and criminal matters;

2. Labor jurisdiction, dealing exclusively with matters arising in the field of labor law;

3. Administrative jurisdiction, which deals with all disputes arising under public law and that are not allocated to other jurisdictions;

4. Social welfare jurisdiction, specialized on the field of social welfare law; and

5. Fiscal jurisdiction, dealing exclusively with tax law.

The proceedings are governed by appropriate court and procedure acts. All courts of these five branches of jurisdiction apply both Länders law and federal law; the precedence of the latter in case of conflict is provided by Article 31 (GG).

Over and above this five-branch system of jurisdiction there is the Federal Constitutional Court, the highest German court. Its jurisdiction and concept are prescribed in Articles 93 and 94 (GG). It decides exclusively in matters of constitutional law, renders final and binding interpretations on the Basic Law, and ensures that no organ of the state violates the constitution. Although it has the power to quash decisions of even the highest federal courts if it finds them to be unconstitutional, it is not a superior instance for judicial review. Basically, the same system applies in the constitutional courts of the Länder.

In German law there is a fundamental distinction between private law that regulates relations among private people and/or corporations, and public law that regulates relations between citizens and public authorities acting in the public interest, or among those authorities. As most of the environ-
mental law is public law, cases arising from this field are mostly tried in the administrative courts. That branch of jurisdiction is therefore examined more closely below.

Like the other branches of the government, the administrative jurisdiction is organized into three levels. The administrative courts, at the first level, are composed of three professional and two lay judges; some cases can be decided by just one of the professional judges. The superior administrative courts at the second level, with a similar membership as the lower courts, or without lay judges, review first-level decisions on matters of fact or law. The Federal Administrative Court, as the final appeal level for cases involving federal administrative law, reviews them only on legal matters; its membership consists of five professional judges. The procedure of all administrative courts is governed by the "Administrative Courts Procedure Act" - Verwaltungsgerichtsordnung (VwGO), that provides, under its § 67, that a party may be represented by any capable person before lower and upper administrative courts, but that before the Federal Administrative Court, parties may only be represented by an attorney or a professor of law at a German university.

One of the most important principles in German procedural law, also laid down in the Basic Law, (Article 101 I (GG)), is that of the lawful judge, which means the binding allocation of cases to the appropriate jurisdiction and, within that, to a specific judge. There is no overlapping; the plaintiff thus does not have any possibility of choosing a court. The liability for courts and attorneys fees is allocated by the court. The decision on costs is based on the "loser pays" principle.

C. FACTS AND FIGURES

Germany, with a population of about 80 million, living on a territory of 357,000 km², with a north-south extension of 867 km, and an east-west extension of 640 km, is today one of

22. Id. at 60-61.
23. Id. at 21.
24. Id. at 36.
25. FACTS ABOUT GERMANY, supra note 6, at 9.
the most densely populated countries in Europe. About a third of its inhabitants live in 85 cities with a population of more than 100,000. The population increase after World War II was due mainly to immigration. The country is highly industrialized and thus faces a broad range of environmental problems, especially in the new Länder where until the reunification in 1990, economic development was valued more highly than the protection of the environment.

There has been much legislation in recent decades on the federal as well as Länder level to deal with severe pollution of water, soil, and air in the entire country; to prevent unsustainable resource consumption; and to contribute to the protection of the atmosphere and global climatic conditions.

D. ENVIRONMENTAL ADMINISTRATION

When in the late 60's public awareness of environmental problems began to grow, doubts arose about the previously unchallenged concept of steady and unlimited economic growth. At about the same time, many people began to be concerned about the safety of nuclear reactors. Since the concentration of responsibility for environmental tasks at the federal level seemed to be appropriate, a policy of environmental protection was developed in the early 70's. However, a “Federal Ministry for the Environment, Nature Conservation and Nuclear Safety” was established only in 1986, after the Chernobyl nuclear accident had shown the necessity of coordinating environmental policy at the federal level. The ministry ranks in the highest tier of the federal government and has responsibility for setting up the objectives and instruments of

26. Id. at 12.
27. Id. at 13-14.
28. FEDERAL MINISTRY FOR THE ENVIRONMENT, ENVIRONMENTAL POLICY IN GERMANY 99 (Information Brochure by the German Government), (Bonn: July 1994) [hereinafter ENVIRONMENTAL POLICY].
31. REHBINDER, supra note 29, at 9.
environmental policy and providing the framework and conditions for implementation of that policy.

Back in 1974, a "Federal Environmental Agency" was established as a non-executive superior federal authority under Article 87 III (GG). Its tasks comprise, essentially, the funding and support of environmental research projects, monitoring and documentation of the state of the environment, provision of scientific support for the conceptual tasks of the federal ministry, participation in the drafting of impact assessments, as well as public relations and educational work. About bi-annually, it issues a report on facts and figures on the environment in Germany.

As the implementation of federal legislation is a Länder task under Article 83 (GG), it is self-evident that the Länder governments are especially concerned with environmental protection. They carry out their duties on three administrative levels. On the superior level, there is the ministry of the Land, mostly a ministry for the environment in combination with related tasks; there is an upper administrative authority at the district level, and a lower administrative level serving the municipalities. The latter administrative authorities perform the implementation of environmental policy partly as a self-governmental task in their own areas of responsibility but mostly carry out directives issued by higher authorities. Within the administration, the administrative circular is the most used means for the implementation of environmental legislation.

III. LEVELS OF SUBSTANTIVE ENVIRONMENTAL LAW

Environmental deterioration tends not to observe national borders. Consequently, for a country like Germany, located in the center of a densely populated region, international legal and political cooperation concerning the environment is as important as its national environmental legislation.

32. HOPPE, supra note 30, at 279-280.
33. HANNS ENGELHARDT, BÜRGER UND UMWELT, 112-113 (München: Beck/dtv 1990) [hereinafter ENGELHARDT].
A. INTERNATIONAL ENVIRONMENTAL LAW

International environmental law operates on three levels: the multinational treaties on the United Nations level, multilateral or bilateral treaties concerning regional spills, and the European Community law.

1. Multinational Treaties on the UN Level

Germany signed and ratified most of the multinational treaties deposited with the Secretary General of the United Nations. The Convention on Long Range Transboundary Air Pollution, Geneva, 1979, was signed and ratified as well as its four follow-up protocols: Geneva, 1984, concerning financing and monitoring; Helsinki, 1985, concerning the reduction of sulfur emissions; Sofia, 1988, concerning nitrogen oxides emissions control; and Geneva, 1991, concerning the control of VOC emissions, in which Germany committed itself to reducing its annual emissions of VOC by at least 30% by 1999 on the basis of the 1988 level.34


Additionally, Germany is party to the Basel Convention on the Control of the Transboundary Movements of Hazardous Wastes, 1989; the Espoo Convention on Environmental Impact Assessment in a Transboundary Context, 1991; the Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 1992; and the Helsinki

35. Id. at 868-877.
36. Id. at 885-891.
Convention on the Transboundary Effects of Industrial Accidents, 1992.\textsuperscript{37}

The signing and deposit of the instruments of ratification did not necessarily take place on the given dates set forth in those agreements. In general, the legislative process on the national level required about two years to complete.

2. Regional Treaties

Besides the treaties on the UN level, there are numerous multilateral and bilateral treaties and agreements concerning overlapping issues as well as specific nature conservation issues.

Germany belongs to several international commissions on the protection of the transboundary rivers Rhine, Moselle and Saar, Elbe, and Oder; to the International Commission for the Protection of Lake Constance; and to a Dutch-German and a Polish-German Commission on the Protection of Transboundary Water Bodies.\textsuperscript{38} It signed the Danube River Protection Convention in 1994, and approved the Danube River Strategic Action Plan. Germany participates in several international agreements for the prevention of ocean pollution,\textsuperscript{39} signed a convention on the protection of the Alps in 1991,\textsuperscript{40} and, in 1976, implemented the Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora (as amended 2 April 1980),\textsuperscript{41} to mention only a few of those agreements.

3. European Union Environmental Law

Many of the environmental and conservation issues are regulated in the European context. That, for example, was the

\textsuperscript{37} Id. at 878-884.  
\textsuperscript{38} ENVIRONMENTAL POLICY, supra note 28, at 64.  
\textsuperscript{39} See ENGELHARDT, supra note 33, at 61.  
\textsuperscript{40} ENVIRONMENTAL PROTECTION IN GERMANY 215-216 (Federal Ministry for the Environment ed.) (Bonn: Economica 1992) [hereinafter ENVIRONMENTAL PROTECTION].  
\textsuperscript{41} See id. at 213.
case with the EC Directive on the Conservation of Wild Birds implemented by provisions of the Federal Nature Conservation Act in connection with the Federal Ordinance on Species Protection.42

The European Community, called the European Union since the Maastricht Treaty of 1992, does not have general legislative jurisdiction. Its lawmaking power derives from the EEC treaty.43 Nevertheless, as a supranational organization to which the member states have ceded special administrative and legislative powers, the EU has, in contrast to other international organizations, the ability to pass law that is binding on its member states.44 Under Article 189 of the EC treaty, the legislative and administrative powers of the Union comprise "Regulations," "Directives," and "Decisions."

Regulations are directly applicable to and binding on the member states, and so do not need to be transformed into national law. Directives, the most frequently used kind of EU legislation, although binding in respect to the desired results, are not directly applicable but leave the choice of method of implementation to the member states.45 The European Court of Justice holds that if a member state delays the transformation of a directive into national law, it is not supposed to apply national law at variance with the directive.46 EU Decisions are directly binding on the addressee.47

For a long time, the legislative power of the EU in the field of environmental law was not very clear, even though the importance of the issue was addressed by a declaration made by the heads of states and governments during the Paris Con-

42. Id. at 211.
43. LUDWIG KRÄMER, FOCUS ON EUROPEAN ENVIRONMENTAL LAW 1, (London: Sweet & Maxwell 1992) [hereinafter KRÄMER].
44. Id. at 2.
46. HOPPE, supra note 30, at 34.
ference of 1972\(^\text{48}\) which led to the adoption of the first “Programme of Action” in 1973.\(^\text{49}\) With the “Single European Act,” the 1986 amendment to the EC Treaty, Title XVI “Environment,” was newly included in the treaty under Articles 130 (r-t), which can undoubtedly be considered the basis for the environmental legislation of the Union.\(^\text{50}\) Under Article 130 (r) II, the principles of prevention of damages, correction of damages at their origin, and polluter pays were established as fundamental principles for the Community’s environmental law.\(^\text{51}\) These principles are intended to attain the four primary objectives set out in Article 130 (r) I: 1. protection of the environment and improvement of its quality, 2. protection of human health, 3. prudent and economic use of natural resources, and 4. support for international actions concerning regional or global environmental problems.

Additionally, Article 100 (a) provides a basis for environmental legislation through harmonization of law within the community to create favorable conditions for the implementation of the “Internal Market.” Because of differing procedural conditions, there is political tension concerning the applicability of each of those two provisions.\(^\text{52}\) One of the objectives of some of the new provisions introduced by the “Treaty on the European Union,” signed at Maastricht in 1992,\(^\text{53}\) was to ease those tensions.

In the case of conflict between national and European law, the latter prevails.\(^\text{54}\)

In any case, the EU law in Germany is implemented by the administration of the Länder,\(^\text{55}\) generally by means of administrative circulars\(^\text{56}\) which allow judicial review only in

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49. See id. at 8.
50. Hoppe, supra note 30, at 32; Bird, supra note 47, at 222.
51. Bird, supra note 47, at 222.
52. See Krämer, supra note 43, at 79-84.
54. Hoppe, supra note 30, at 35.
56. Adams, supra note 45, at 46.
respect to arbitrariness.\textsuperscript{57} Administrative circulars are directly binding only on the administration itself; their binding effects on a third party can be derived from the principle of equal protection, laid down in Article 3 (GG), and from the general principle of self-binding by the administration through precedents and circulars.\textsuperscript{58} Though not uncontested, the Federal Administrative Court has held that these regulations merely serve to concretize laws if their promulgation is based on scientific findings in a procedure provided by law and in which interested parties have opportunity to participate. Judicial review is thus limited to the question of arbitrariness.\textsuperscript{59}

B. GERMAN ENVIRONMENTAL SUBSTANTIVE LAW

As mentioned above, Germany is a country with a “civil law” tradition. Legislation is normally divided into general and specific provisions. The general provisions lay down the underlying principles for the specific provisions. The following description of the German environmental law system will therefore first focus on general principles before discussing the specific substantive environmental law.

1. General Environmental Law

Since all national law has to be in accord with the Basic Law, we need to begin by scrutinizing the provisions on environmental law laid down in the constitution.

Despite a number of attempts to amend the constitutional catalogue of fundamental rights, Articles 2-19 (GG), by the addition of a basic right to a healthy or decent environment, no such amendment to the Basic Law has as yet been enacted. Nor has the protection of the environment even been declared a national objective. However, there is broad agreement on the idea of protection of limited resources as a national objective.\textsuperscript{60}

\textsuperscript{57} HOPPE, supra note 30, at 44.
\textsuperscript{58} Id. at 42.
\textsuperscript{59} Id. at 44-45.
\textsuperscript{60} Id. at 49.
The constitution of the former GDR did proclaim prevention of pollution and protection of flora, fauna, and natural beauty as a public as well as a personal responsibility. Some of the Länder constitutions also specify protection of the environment as an objective.

On the federal level, the fundamental rights guaranteed by the Basic Law traditionally grant protection only from violations by public authorities. They can therefore be invoked against those actions only, but not against private actions, which are the most frequent sources of environmental stress. However, the Federal Constitutional Court has stated in recent cases that the constitutional guarantee of life and physical integrity can require an active environmental policy to avoid the risk of harm. Where the implementation of those policies interferes with the constitutional guarantee of property, the protection which the Basic Law provides for natural resources and the environment can be derived especially from Article 14 II (GG), a provision that imposes a social obligation on ownership or other property rights. This means that the property owner is not free to use his property without consideration of public needs. The potential obligation to "sacrifice" his property rights to public needs derives from the concept of a "situational commitment of the property" that follows from the view of man as an individual who is dependent on society. So long as the basic principles of proportionality and protection of vested rights are not violated, limitations on use or disposability are not considered a taking but a result of the determination of social obligation, in which case compensation is not mandatory. Although it is often difficult to draw the line between taking and social obligation, this constitutionally based legal instrument is in many cases a very important tool for the construction of an effective legal approach to environmental protection.

61. ENGELHARDT, supra note 33, at 27.
62. HOPPE, supra note 30, at 58.
63. REHBINDER, supra note 29, at 11.
64. RUDOLPH DOLZER, PROPERTY AND ENVIRONMENT: THE SOCIAL OBLIGATION INHERENT IN OWNERSHIP 22 (Morges, Switzerland: IUCN 1976) [hereinafter DOLZER].
65. HOPPE, supra note 30, at 56.
66. DOLZER, supra note 64, at 58.
Weighing the intensity of the regulation against protected rights requires the application of a balancing test to ascertain the threshold. Encroachment on the essence of fundamental rights defined in the Basic Law is unlawful under Article 19 II (GG).

German environmental law and policy are similar to the EC law mentioned above and are based on three principles: 1. the principle of precautionary action or anticipatory environmental protection, 2. the principle of polluters' liability, and 3. the principle of cooperation.

The principle of precautionary action is aimed at the prevention of environmental damages, the minimization of risks, and the conservative use of natural resources. Its legislative model can be found basically in the "Environmental Assessment Act" - Gesetz über die Umweltverträglichkeitsprüfung (UVPG) - of 1990, enacted for the implementation of the corresponding EEC Directive of 1985. It requires an EIS (Environmental Impact Statement) process to be integrated into the planning process for projects that need permission and have an impact on the environment.

Some of the provisions of specific environmental laws, such as the Water Act, the Nature Conservation Act, the Atomic Energy Act, and the Federal Pollution Control Act, which will be discussed later in the paper, are also formulated under the principle of precautionary action.

The principle of polluter liability basically requires the polluter to pay. It is applicable not only for the cleaning up of polluted sites and the imposition of user fees but also for the determination of the addressee of an administrative order designed to prevent pollution. Nevertheless, in cases of emergency, or when the polluter cannot be ascertained, a cleanup

67. Id. at 24.
68. ENVIRONMENTAL PROTECTION, supra note 40, at 74-75; HOPPE, supra note 30, at 17-19.
69. HOPPE, supra note 30, at 18, 80.
70. BGBI.I, p. 205, 1080.
71. HOPPE, supra note 30, at 82-83.
will be financed by public revenues. Also, the possibility of public funding or subsidies for environmentally friendly undertakings and the availability of public funds for managed waste disposal and sewage treatment indicate that the implementation of the "polluter pays" principle is not absolutely binding. 72

The legislative enactment of the principle of cooperation is mainly to be found in the administrative procedure provisions that specify participation rights for all involved parties, administrative regulators as well as the regulated public, polluters, and affected citizens. 73 The principle does not go so far as to provide for a regulatory negotiation procedure.

Besides these fundamental principles, technical developments, economic interests, and considerations of equity have to be taken into account in the process of environmental lawmaking. 74

Legal instruments for the achievement of the general environmental objectives are as numerous as they are diverse. With respect to their effects, they can be distinguished as follows: directly regulating instruments, taking the command and control approach; indirectly regulating instruments, using economic incentives or liability regulations to achieve the desired result; and planning instruments. The latter, which are widely used in environmental legislation, incorporate both management and precautionary aspects.

These instruments are used in the form of general administrative regulation and specific case-related administrative action, which includes orders and permits. Specific administrative action can be challenged in the Administrative Courts, under § 40 VwGO; general administrative regulations, such as regional plans, can be challenged in the Superior Administrative Courts, under § 47 VwGO. Venue is determined by the location of the property or the region affected by the adminis-

72. Id. at 84; REHBINDER, supra note 29, at 13.
73. HOPPE, supra note 30, at 85.
74. ENGELHARDT, supra note 33, at 42-44.
trative action, or, if no property is involved, by the location of
the acting administration, under §§ 52, 53 VwGO.

Diverse claims require diverse kinds of proceedings, which
are permissible under the various conditions of §§ 42, 43
VwGO. Essential preconditions include the exhaustion of ad­
ministrative remedies, under § 68 VwGO, and a standing to
sue under § 42 II VwGO. Standing requires, basically, that the
plaintiff is injured in his rights. There is no citizen suit provi­
sion in the federal administrative law, although § 42 VwGO
provides for the possibility to institute a proceeding for associa­
tions. This question was debated at the federal level but was
adopted only in a few Länder.\textsuperscript{75} Law enforcement in Germany
is in principle confined to the public authorities.

2. Specific Substantive Environmental Law

German environmental law is fundamentally based on a
number of basic statutes which regulate the various issues in
this field. Most of these statutes contain enabling provisions
for the administration to promulgate standards and detailed
regulations by means of ordinances. As a result, a rather com­
plex body of law has been established which is impossible to
analyze in detail within the scope of this paper.

To show how the above mentioned legal instruments func­
tion in their concrete contexts, the paper will focus on some of
the specific federal level environmental law statutes and at­
tempt to explain their underlying logic.

a. Control of air and noise pollution

Both air and noise pollution are addressed by the “Fed­
eral Pollution Control Act” - Bundes-Immissionsschutzgesetz
(BImSchG) - of 1974,\textsuperscript{76} a centerpiece of the German environ­
mental law system, which was enacted by the federal legisla­
ture, exercising its concurring legislative power under Article
74 Nr. 24 (GG). Additionally, issues of air and noise pollution

\textsuperscript{75} HOPPE, supra note 30, at 200-201.
\textsuperscript{76} BGBl.I, p. 721.
are also addressed by a host of legal and administrative regulations and ordinances.

The act is organized in seven parts:

The first part, §§ 1-31 BImSchG, lays out the objectives of the act as the protection of humans, animals and plants, soil, water, atmosphere, and cultural and other goods from detrimental impacts, as well as the prevention of those impacts. This statement of objectives functions primarily as a tool for the interpretation of indefinite legal terms and a standard to apply in the exercise of administrative discretion. It also specifies the field of applicability of the provisions that follow and defines the most important legal terms.

The second part, §§ 4-31a BImSchG, distinguishes facilities that need an operating permit from those which do not. It sets the prerequisites and procedures for obtaining operating permits and determines the operators' obligations. It also sets rules for the gathering of data on emissions and for safety inspections.

The third part, §§ 32-37 BImSchG, deals with the construction and composition of facilities, substances, products, and fuels, and enables the administration to promulgate appropriate regulations concerning those matters in respect to the protection of the environment.

The fourth part, §§ 38-43 BImSchG, regulates the construction and operation of vehicles, highways, and railroads in ways that prevent detrimental impacts on the environment. It also enables the administration to promulgate detailed regulations concerning these matters.

The fifth part, §§ 44-47a BImSchG, deals with control of air quality and noise prevention. It requires the Länder administrations to tighten air quality control and noise abatement plans if certain standards are exceeded.

77. HOPPE, supra note 30, at 399-400.
The sixth and seventh parts, §§ 48-74 BImSchG, contain general authorization for the administration to promulgate regulations dealing with standards and control measures, authorization for the Länder administrations to determine areas of special protection, and authorization to promulgate regulations for the purpose of implementing EU law. They additionally contain procedural regulations, exemptions for military purposes, and the obligation for the government to give reports on the state of pollution and pollution abatement to the Bundestag.

The detailed regulations contained in ordinances, plans, legislative and sublegislative legal norms, as well as in legislation which is only marginally related to environmental law (for example the traffic ordinance that among other provisions prohibits unnecessary emissions of gases and noise), are too numerous to be analyzed in detail within the scope of this paper. However, the combination of this multiplicity of regulations has in recent decades worked relatively well in the field of air pollution abatement, as evidenced by the fact that emissions of almost all of the essentially polluting gases in the old federal Länder have dropped since 1970. The emissions of nitrogen oxides dropped since 1986, but are still higher than in 1970. Still, even though air quality seems to have improved substantially since reunification, much remains to be done. That is especially true in the new Länder, where due to extensive use of lignite, air pollution used to be very high.

Despite the above-mentioned regulations, noise pollution is a growing factor in environmental impact as the numbers of vehicles and airplanes, the most serious sources of noise pollution, are still increasing. Noise deriving from industrial or building sites also often exceeds acceptable levels, so that large numbers of people feel seriously troubled by noise.

78. ENVIRONMENTAL POLICY, supra note 28, at 39-41.
79. See Report, FAZ, Mar. 29, 1995, at N1. Editors' note: FAZ is the abbreviation for the daily German newspaper FRANKFURTER ALLEGEIMEINE ZEITUNG.
80. See ENVIRONMENTAL POLICY, supra note 28, at 34.
81. ENVIRONMENTAL PROTECTION, supra note 40, at 68.
b. Control of water pollution

Since the end of the last century, increasing industrialization and population density have caused both increased need of water and increased water pollution. Especially the large rivers, the Rhine with its main tributaries, as well as the rivers Weser, Elbe, and Oder, were considerably polluted. They in turn contributed to the pollution of the Baltic and the North Sea. In 1971, the federal government established an environmental program with three major long-term objectives: 1. maintenance or re-establishment of the ecological equilibrium of waters, 2. safeguarding of the quality and quantity of drinking water, and 3. making possible those uses of waters that serve the public interest. With that in mind, waters were classified into four grades of pollution. The objective is to achieve class I and class II for all waters.

1) Protection of waters

In the field of water protection the Federation has the power to enact framework legislation under Article 75 Nr. 4 (GG). The Federation’s key instrument in exercising this power is the federal “Water Act” - Wasserhaushaltsgesetz (WHG) - of 1957, the oldest part of federal environmental law. In its new version of 1986, after having been updated by several amendments, this act sets the framework for the water laws of the Länder, which are obliged to keep their regulations within that frame. They do not have much discretion, as the provisions of the federal Water Act tend to be rather precise. The act is applicable to surface water, coastal water, and groundwater, under § 1 WHG.

The first part, §§ 1a-22 WHG, deals with the general principles of prevention of water pollution. Section 1a WHG establishes three fundamental principles: 1. waters, as a part of
nature's economy, are to be managed in ways that serve the public interest; within that requirement it can equally serve private interests, but any avoidable impact has to be prevented; 2. everybody has the obligation to treat waters with the appropriate diligence to prevent pollution or deterioration; and 3. property ownership does not entitle one to any use that would need a permit under federal or Ländere water laws.

Section 3 WHG provides a catalogue of those uses that are prohibited without permission. This catalogue is rather comprehensive; it includes virtually any kind of use that could be economically significant. A permit can be granted under conditions or with reservations under §§ 4, 5 WHG; permits are revocable, can be given temporarily, or may not be granted, under § 7 WHG, if a violation of public interests or an endangerment of the public water supply may be expected.

Section 19 WHG allows the defining of water protection areas for the purpose of protection of groundwater and surface water from depletion or deterioration, as well as for the prevention of detrimental runoff. Within these protected areas, limits to potentially detrimental uses are to be handled even more strictly.

Sections 18a-18c WHG impose obligations on the Ländere to establish waste water disposal plans, to use the best available technology for the construction of sewage treatment plants, and to do EIAs (Environmental Impact Assessments) before construction of such plants.

Section 7a WHG, amended in 1976, sets up minimum requirements for the discharge of waste water; it enables the administration to regulate this issue appropriately88 and to require the application of the best available technology. It empowers the Ländere to determine the periods of time within which the required standards are to be achieved.

Section 22 WHG provides for the strict, joint and several liability of polluters for damages caused by discharges that

88. ENVIRONMENTAL PROTECTION, supra note 40, at 148.
alter the physical, chemical, or biological composition of waters. The same liability applies to the operator of a facility from which detrimental discharges are emanating. 89

A rather new kind of instrument in the field of water law is the "Waste Water Charges Act" - *Abwasserabgabengesetz* (AbwAG) - which was promulgated in 1976 and amended in 1990. 90 It enables the *Länder* to impose fees on the discharge of waste water and to calculate those fees in respect to the harmfulness of the discharged waste water. This construction of the act is meant to assist in preventing harmful discharges. 91 The revenues from those fees have to be spent for measures designed to maintain or improve water quality.

In 1987, the "Washing and Cleansing Agents Act" - *Wasch- und Reinigungsmittelgesetz* (WRMG) - from 1975 92 was revised and newly promulgated. Its fundamental provision, § 1 WRMG, prohibits the sale of washing and cleansing agents that have avoidable detrimental impacts on waters or sewage treatment plants. It imposes duties on consumers to act environmentally friendly, and also imposes duties on producers to construct technical washing and cleansing devices in ways that minimize the amounts of cleansing agents needed. Sections 7 and 9 WRMG require the appropriate and informative labeling of washing and cleansing agents in respect to contents and dosage.

Section 5 WRMG enables the federal administration to prohibit or limit the use of certain hazardous substances in washing and cleansing agents, but only as far as this will not be unreasonable for the industries concerned.

Over all, the WRMG encourages voluntary compliance, rather than relying on command and control instruments. 93

90. BGBl.I, p. 2432.
91. HOPPE, *supra* note 30, at 386.
92. BGBl.I, p. 875.
93. HOPPE, *supra* note 30, at 392.
In combination, these different concepts concerned with water protection seem to work rather well in respect to surface water; the water quality of the rivers, especially in the old Länder, has been improved considerably during the last two decades. In the new Länder, much still remains to be done. For example, in 1994 only 36% of their sewage was treated in plants employing biological sewage treatment methods, whereas such treatment was applied to about 90% of all sewage in the old Länder.

Despite the above-described legal water protection system, ground water pollution seems to have increased, due to industrial and agricultural sources. But since this has not yet been systematically recorded, it is too early to draw conclusions or deal with consequences. That awaits the establishment of ground water observation networks throughout the country, a project currently underway.

2) Protection of oceans

There is a high degree of pollution in both the Baltic and North Seas, due to their extensive use by littoral nations. Maritime traffic, exploitation of oil and gas wells, and increasing hazardous effluent through rivers and directly from the densely populated coastal regions constantly cause pollution problems. Even atmospheric pollution contributes to the pollution of the oceans, a problem whose abatement still has to be dealt with.

Most of these problems can be solved only through international cooperation. To that end, Germany pressed for and participated in numerous multinational agreements, including the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, the 1974 Helsinki Convention for the Protection of the Baltic Sea, several treaties on the protection of transboundary rivers, and the

94. ENVIRONMENTAL POLICY, supra note 28, at 59.
95. Id.
96. ENVIRONMENTAL PROTECTION, supra note 40, at 45-46.
97. Id. at 47-48.
highly important 1992 Paris Convention on the Protection of the Marine Environment of the North-East Atlantic.\textsuperscript{98}

In 1988, a 10-point catalogue for protection of the oceans was adopted by the federal government. It contains an agglomeration of measures aimed at achieving the implementation of those international agreements.\textsuperscript{99} Despite the fact that the government states that the basic particulars of that catalogue were already met by 1994,\textsuperscript{100} there still seems much that could be improved.

c. Rehabilitation and protection of soils

Contamination of soils is one of the most serious problems that occurred in Germany in the course of the country's rapid economic growth and scientific and technological progress. In the absence of legislative regulations on the treatment of hazardous substances or residues and of in-depth knowledge of scientific contexts and effects, there was not until recently much public awareness of the environmental problems caused by numerous abandoned production sites or improperly, sometimes even illegally, operated waste dumps.\textsuperscript{101} There is as yet no complex federal legislation that is comparable, for example, to the U.S. "Superfund law," by which those problems can be addressed in a comprehensive way.\textsuperscript{102} The civil law aspects of the problems have generally been tried to be solved under tort laws, whereas the public law aspects have mostly been attacked through general laws concerning the public order, under which the owner as well as the operator of a cleanup site can be held liable. Very often solutions remain unsatisfactory because of the lack of retroactivity of the laws applied in those cases. Very often there is then no other way than to spend public funds on necessary cleanups.

\begin{itemize}
\item 98. \textit{Environmental Policy}, supra note 28, at 64-68.
\item 99. \textit{Environmental Protection}, supra note 40, at 154-156.
\item 100. \textit{Environmental Policy}, supra note 28, at 63.
\item 101. Ludger-Anselm Versteyl, Abfall und Altlasten, 195 (München: Beck/dtv 1992) [hierinafter Versteyl].
\item 102. Scherer, supra note 89, at pp. 85 et seq.
\end{itemize}
Soils increasingly show signs of severe deterioration, not only due to pollution but also to erosion or otherwise detrimental land use practices such as compacting or overgrazing.

As there is no particular and comprehensive soils protection act in German environmental law, all of those issues are addressed in diverse legislative contexts, especially in those of regional planning, nature conservation, land use laws, as well as mining and waste management laws.

In the legal areas of nature conservation, landscape management, and regional planning, the Federation, under Article 75 (GG), only has the power to pass framework legislation. The areas of mining and land use law, on the other hand, fall within concurrent legislation, under Articles 72 and 74 (GG). That means that the Länder have legislative power only to the extent to which the Federation has not exercised its legislative power.

Section 2 I Nr.7 ROG - Raumordnungsgesetz, the "Regional Planning Act" of 1991, declares protection of soils expressly as an issue for regional planning. But as the regional planning management has to deal with numerous other issues as well, the necessary balancing of all those demands for its attention prevents environmental aspects from being given paramount importance in this context.

The federal "Building Act" - Baugesetzbuch (BauGB) - of 1986 requires the economical and conservative use of land in its so-called "soil protection clause," covered in section 1, number 5, sentence 3 of the BauGB. In the balancing of factors required for the regional planning processes under BauGB, environmental and conservation considerations are thus accorded greater weight than other factors.

103. HOPPE, supra note 30, at 37.
104. ENVIRONMENTAL PROTECTION, supra note 40, at 175-176.
105. BGBl.I, p. 1726.
106. HOPPE, supra note 30, at 96-97.
107. BGBl.I, p. 2253.
108. HOPPE, supra note 30, at 100.
Section 5 BauGB provides for the establishment of land use plans which can contain limitations to land use that are rooted in environmental considerations; this provision further requires the marking of areas where soil is significantly contaminated.

Section 9 BauGB provides for the possibility of establishing public or private green belts and adopting measures required for the protection and development of nature and landscape.\textsuperscript{109}

All development projects require a permit, the conditions for which are regulated under §§ 29-38 BauGB. These conditions are based on the provisions of land use plans which are generally passed as municipal laws.

As mentioned above, the “Federal Nature Conservation Act” - Bundesnaturschutzgesetz (BNatSchG) - of 1976\textsuperscript{110} is a framework law. It sets out as one of its fundamental principles, the maintenance of soil and its natural fertility, in § 2 I Nr. 4 BNatSchG. The implementing legislation for the principles of this act have to be passed at the Länder level.

There are various other acts and ordinances containing soil protection provisions.\textsuperscript{111} Work is currently underway on the codification of a specific “Soil Protection Act” that will provide a comprehensive and interdisciplinary approach to soil protection, including requirements for decontamination of polluted soils and rehabilitation of waste deposits.\textsuperscript{112}

d. Solid wastes and hazardous substances

In this field of law, the Federation has exercised its concurring legislative power, under Articles 72 and 74 Nr. 19 and 24 (GG).

\begin{flushleft}
\textsuperscript{109} Id. at 101-102.
\textsuperscript{110} BGBl.I, p. 3574.
\textsuperscript{111} See ENVIRONMENTAL PROTECTION, supra note 40, at 175-176.
\textsuperscript{112} Id. at 176.
\end{flushleft}
1) Legislation on waste

After the promulgation of the federal “Waste Disposal Act” - Abfallgesetz (AbfG) in 1972, changes in policy and law led, in 1986, to a new codification of the “Act on Prevention and Disposal of Wastes.” As its name indicates, the new act considers the prevention of waste a task of paramount importance. The reason for this is obvious: in the course of increasing industrialization and wealth, the production of waste is increasing enormously. In the old Länder, the amount of wastes being publicly disposed of increased about 20% between 1980 and 1990. In the latter year, the total amount of wastes was almost 300 million tons. As a result of the growing volume of waste, the number of operable landfills declined from 4,415 in 1975 to 602 in 1992. Though the technique of waste incineration has steadily improved, it cannot provide a long-term solution to the problem, especially in view of the growing resistance of the population to the construction of incinerators close to densely populated areas. Furthermore, public awareness of problems caused by hazardous wastes is also steadily increasing. A comprehensive “cradle-to-grave” regulation on hazardous wastes seemed to have become as necessary as the prevention of avoidable accumulation of waste and the conservation of natural resources by applying and improving recycling systems. In response, the federal Waste Prevention and Disposal Act is now the centerpiece of a comprehensive system of legislative and sublegislative legal norms aimed at providing an integrated system of regulations on waste management throughout the country. Its fundamental principles are as follows:

Section 1 AbfG gives definitions of the terms “waste” and “waste disposal” and specifies fields of nonapplicability. Nuclear wastes and mining wastes, for example, are exempted from these regulations.

113. BGBl.I, p. 873.
114. Id. at 1410.
115. HOPPE, supra note 30, at 468.
116. DATENREPORT 1994, 380 (Statistisches Bundesamt ed.), (Bonn: Bundeszentrale für politische Bildung) [hereinafter DATENREPORT].
117. Id. at 379.
Section 1a AbfG basically states that wastes should be prevented by the reuse or recycling of materials.

Section 2 AbfG establishes as a fundamental principle that wastes which cannot be prevented have to be disposed of in a way that is not dangerous for man or nature. It requires the setting of higher standards for the disposal of industrial and hazardous wastes.

Section 3 AbfG sets an obligation for the owner of wastes to have them disposed of by public corporations, and it imposes the appropriate disposal duties on those corporations.

Section 4 AbfG regulates waste disposal management.

Section 6 AbfG imposes a duty on the Länder to establish waste disposal plans.

Collection and transport of waste without permission is prohibited, under § 12 AbfG. For transboundary transport there are even more stringent permit requirements.

Detailed regulations on all waste management and disposal issues have been established by the administration on the basis of § 14 AbfG; not all of them can be explained here in detail. But one, the packaging ordinance, a rather unique and effective tool to minimize packaging wastes, can be briefly described as follows:

The “Packaging Ordinance” - Verpackungsverordnung (VerpackVO) - of 1991, is aimed at substantially reducing household wastes. Packaging comprised about 50% of the volume of household wastes in Germany by 1991. As landfills tended to become scarce - NIMBYs exist in Germany as well as the U.S. - and voluntary agreements intended to limit packaging proved not to work as desired, using the tool of an ordi-

118. BGBl. I, p. 1234.
119. VERSTEYL, supra note 101, at 93.
nance seemed the only viable way to force a change - although there was much resistance by industry and retail business.\footnote{120}

The packaging ordinance basically imposes a duty on the retailer to take packaging materials back, without charge. Waste disposal, which is rather expensive in Germany, in most communities is paid for by volume, and so consumers are obviously interested in the opportunity this offers them. Whereas the regulation required the recycling of 100,000 tons of plastic waste in 1993, consumers collected 400,000 tons, thus causing a shortage of recycling facilities.\footnote{121} Industry and retailers established the so-called “Dual System” (Duales System) to manage and finance the imposed duty by using a “green dot” as marking for recyclable packages.\footnote{122} The system seems to work rather well. However, its critics object that it does not reduce packaging wastes but, on the contrary, increases them, since consumers are misled by the green dot to believe they are acting environmentally friendly when they purchase an environmentally friendly packaged product, whereas in fact the recycling generally does not work properly in the absence of appropriate and cost effective recycling technology.

In any case, reuse is preferable to recycling, since it is a much more environmentally friendly system. The federal government has therefore introduced a new ordinance on beverage packaging. It is to become effective in 1997 and is intended to increase the amount of reusable beverage packaging.\footnote{123}

Also important in this connection is the current debate on material flow and substance chains, which already in 1994 led to the promulgation of a new Material Cycling and Waste Disposal Act\footnote{124} that is to go into effect in October, 1996. It will partly replace the present federal legislation on wastes and establish a general product liability for manufacturers as well as retailers. The product liability will be based on the following

\footnotesize

120. \textit{Id.} at 94.
123. \textit{Id.} at 108.
obligations to: 1. develop and produce long-lasting and reusable products which can be recycled in ways least harmful to the environment, 2. use recycled materials for production, 3. appropriately label products which contain harmful substances, and 4. take the used product back for recycling, if possible, or for disposal. Furthermore, the act will establish an obligation for the public sector to use recycled products where possible, an obligation that already exists in some of the new Länder legislation on waste.\textsuperscript{125} The idea of improving material flow cycles has been promoted vigorously by politicians and scientists, working together in the Enquete Commission of the German Bundestag on the "Protection of Humanity and the Environment." The Commission has issued two reports concerning the problems of sustainable management of substance chains and material flows.\textsuperscript{126}

2) Legislation on chemicals

Hazardous substances are subject to the regulations of the "Hazardous Substances Control Act" - Chemikaliengesetz (ChemG) - of 1990.\textsuperscript{127} The objectives of this act are the protection of humans and the environment from detrimental impacts of hazardous substances and the prevention of those impacts, § 1 ChemG.

To achieve those objectives, the act provides for three main regulatory instruments:

1. It imposes an obligation on the manufacturer of new chemical substances to notify the public authorities at least 45 days prior to their marketing, under §§ 4 et seq. ChemG.

2. It imposes an obligation on manufacturers and importers of hazardous substances to classify, pack, and appropriate-

\textsuperscript{125} ENGELHARDT, supra note 33, at 250.
\textsuperscript{127} BGBl.I, p. 521.
ly label those substances, indicating the degree of dangerousness under §§ 13 et seq. ChemG.

3. It enables the federal government to prohibit or restrict the manufacture, marketing, or use of hazardous substances, especially for the purpose of preventing health risks or protecting occupational safety, under §§ 17 et seq. ChemG.

The regulations of the Chemicals Act are complemented by several related acts and ordinances dealing with the protection of human and animal food, as well as with the marketing and use of pesticides and fertilizers. Special laws and ordinances prohibit the manufacture, marketing, and use of DDT (1972),128 PCB and PCP (1989),129 as well as those CFCs that have detrimental impacts on the ozone layer (1991).130

For "old" substances, notification and testing requirements are different. "Old" substances are those which were already on the EC market between 1971 and 1981; they are listed in the European Inventory of Existing Commercial Chemical Substances (EINECS), which has been implemented in Germany through an ordinance.131

e. Energy

Nuclear Energy comprises about 30% of the total energy generated in Germany; the output from the country's 21 nuclear reactors is 24000 megawatts.132 The most critical issue besides the nuclear safety problem is that of appropriate and safe treatment of nuclear waste. As there is still no procedure for really safe storage of nuclear waste, many people would like to see atomic energy generation abandoned, an objective that is vigorously debated within and among the political parties. In view of existing political alignments and the powerful economic interests involved, the achievement of that objective currently does not seem very realistic.

128. Id. at 1385.
129. Id. at 1482, 2235.
130. Id. at 1090.
131. Scherer, supra note 89, at 90.
132. ENVIRONMENTAL POLICY, supra note 28, at 89.
The Federation exercised its concurring legislative power to promulgate the "Atomic Energy Act" - *Atomgesetz* (AtG) - in 1976.\footnote{BGBl.I, p. 3053.} This act comprises a closely meshed net of permit requirements for any dealing with nuclear material. In this field of law, the "cradle-to-grave principle" is to a great extent realized.\footnote{HOPPE, supra note 30, at 508.} The transboundary transport of nuclear material is covered by the Paris Convention of 1982.

The EU legislation on those issues is based on the EURATOM Treaty of 1957, one of the very first European treaties that led to today's European Union.

Additionally, Germany is a member of the United Nations International Atomic Energy Agency (IAEA) in Vienna and of the Nuclear Energy Agency in Paris, a specialized sub-organization of OECD (Organization for Economic Development & Cooperation).\footnote{ENVIRONMENTAL POLICY, supra note 28, at 95.}

For the construction of a nuclear power plant, a special permit is needed. The permission procedures are rather strictly regulated by the Atomic Energy Act, which requires an EIS and a precisely prescribed process of public participation. The public interests in prevention of pollution and other negative impacts on the environment have to be balanced against the economic interests in the project, under § 7 AtG.

A major problem is the dangers emanating from nuclear power plants in the eastern European countries. Plants there do not measure up to the high security standards required in western countries. An incremental phasing out of those plants would of course be the best way to ensure the safety interests of all the western countries, and especially those of Germany, an immediate neighbor. Yet, since this would lead to a severe economic setback in the eastern countries, other solutions have to be found. Several bilateral agreements have been concluded to exchange information, coordinate precautionary measures, and set up an early warning system in case of nuclear acci-
A "Multilateral Action Programme" for the improvement of nuclear safety in Eastern Europe was initiated and partly funded by Germany.137

In the long term, nuclear energy seems too costly because of severe safety problems. So, there is a trend toward the development of alternative and environmentally more friendly kinds of energy generation, as for example, wind or solar energy.

Another very important objective in this connection is the conservation of energy. For this purpose the "Energy Conservation Act" - *Energieeinsparungsgesetz* (EnEG) - was promulgated in 1976.138 The act deals with energy conservation in buildings. It contains obligations for constructors of new buildings, as well as for constructors and operators of heating and cooling facilities, to consider energy conservation aspects while constructing or maintaining their projects and operations. It further requires that users of heating or cooling facilities be charged on a pro rata basis for their individual usage. The act enables the government to set standards and requirements for the construction of buildings and heating and cooling facilities, as well as for the operation of those facilities and the method of assessing charges. This legislation has led to a substantial broadening of public awareness of the problem of energy scarcity. Especially the usage-related charging system appears to show promise of being able to achieve significant savings of energy in the private sector.139

f. Nature and species protection and preservation

1) Nature preservation

Nature preservation has been a subject of public interest in Germany since the beginning of the last century. In 1836, the *Drachenfels*, one of the seven mountains by the river Rhine, close to Bonn, was placed under a special nature protec-

136. *Id.* at 95.
137. *Id.* at 96.
139. See *ENVIRONMENTAL PROTECTION*, *supra* note 40, at figure, p.12.
tion regulation and thereby became the first protected area.\textsuperscript{140}

Whereas the Weimar Constitution expressly granted protection to natural monuments, such a provision is not contained in the Basic Law.\textsuperscript{141} Under Article 75 Nr. 3 (GG), the Federation has the power to promulgate framework legislation in regard to nature preservation. It used this power to enact the "Federal Nature Conservation Act" - \textit{Bundesnaturschutzgesetz} (BNatSchG), in 1976.\textsuperscript{142} The Länder filled that framework by their own legislation and are constitutionally responsible for implementing it.

Section 1 BNatSchG sets out four objectives: 1. the efficiency of nature's economy, 2. the ability to use natural resources, 3. the maintenance of flora and fauna, and 4. the maintenance of natural diversity and beauty. The act takes an anthropocentric approach, since all its objectives are aimed at serving human needs.

Section 2 BNatSchG sets out the basic principles through which those objectives are to be achieved. These principles basically include all the requirements for sustainability, from land use practices and prevention of pollution to conservation of wildlife habitat, recreational areas, and cultural assets.

As an instrument for the implementation of those principles and objectives the act provides, under §§ 5 and 6 BNatSchG, for the possibility of establishing landscape plans by which protected areas can be designated.

Sections 12-19 BNatSchG provide definitions for the terms of those designations but leave the procedural regulation to the Länder. There are various kinds of protected areas. The differentiation is related to the function that is allocated to the protected area in question, from wetlands to recreational areas. Overall, the different protected areas number more than 6000 and comprise about 25% of the entire territory of the Federal

\begin{itemize}
\item \textsuperscript{140} ENGELHARDT, \textit{supra} note 33, at 46.
\item \textsuperscript{141} Id. at 47.
\item \textsuperscript{142} BGBI.I, p. 3574.
\end{itemize}
Republic of Germany.\textsuperscript{143} Actions that have detrimental impacts on nature protection areas are prohibited, under § 13 II BNatSchG; these particularly include construction of buildings, roads, or courts; the changing of soil structure or soil texture; the drawing of ground water causing a change of water balance; the dumping of wastes; camping; the setting of fires; and the causing of noise or air pollution.\textsuperscript{144} Protected areas are accessible to the public, as far as this conforms to the protective purpose. The act provides for the protection of wildlife and wildflowers and includes the protection of their habitat. It regulates, under §§ 20-23 BNatSchG, the import and export of specifically protected species, a legislative incorporation of the Washington Convention on International Trade in Endangered Species and the appropriate EC regulation. In addition, the Ramsar Convention on the Protection of Wetlands and the EC Directive on the Conservation of Wild Birds are implemented through the Federal Nature Conservation Act and the Federal Ordinance on Species Protection.\textsuperscript{145}

2) Animal protection

Protection of the life and well-being of domestic animals, in acknowledgement of human responsibility for them as a part of nature, is the objective of the federal "Animals Protection Act" - Tierschutzgesetz (TierSchG), newly codified in 1986.\textsuperscript{146}

The act is based on the federal concurrent legislative power, under Article 74 Nr. 20 (GG), and deals mainly with the keeping and treatment of domestic animals, under §§ 2 \textit{et seq.} TierSchG. It states the requirement for official permission for animal experiments for scientific purposes, under §§ 7 \textit{et seq.} TierSchG, and regulates the breeding and marketing of domestic animals, under §§ 11 \textit{et seq.} TierSchG. In addition to prescribing regular penalties, it threatens the violator with disbarment from professional dealing with animals.

\begin{itemize}
  \item \textsuperscript{143} DATENREPORT, supra note 116, at 399.
  \item \textsuperscript{144} ENGELHARDT, supra note 33, at 127.
  \item \textsuperscript{145} Id. at 56-57; ENVIRONMENTAL PROTECTION, supra note 40, at 211-214.
  \item \textsuperscript{146} BGBl.I, p. 1319.
\end{itemize}
3) Protection and preservation of forests

The management of forests is subject to the regulations of the “Federal Forest Management Act” - Bundeswaldgesetz (BWaldG), enacted in 1975, partly on the basis of federal concurring legislative power under Article 74 Nr.17 (GG), and partly as a framework law, under Article 75 Nr. 3 (GG).

The objectives of this act are: 1. protection and maintenance of forests for the sake of their economic as well as ecological and environmental values, 2. improvement of forest management, and 3. balancing of public and private interests in forests. These objectives are set out in § 1 BWaldG.

Instruments for the achievement of those objectives include, especially, the forest management framework plans, which have to be issued by the Länder forest administrations, under §§ 6 and 7 BWaldG. The main burden of forest management legislation constitutionally rests with the Länder legislators.

For clear-cutting a permit is required; it may not be granted if public interests in forest preservation outweigh the economic interests of the owner. Ecological, recreational, and economic considerations have to be weighed in the necessary balancing process, under § 9 I BWaldG.

Section 11 BWaldG requires that through Länder legislation an obligation be imposed on the forest owner to reforest clear-cut areas.

Everybody is allowed to walk in public and private forests for recreational purposes, under § 14 BWaldG, but biking and riding are allowed on paths only.

To improve the economic utility as well as the protective and recreational functions of forests, forest management is to be supported financially by public funds, under § 41 BWaldG.

147. Id. at 1037.
148. HOPPE, supra note 30, at 324.
The combination of those provisions shows clearly that the Federal Forest Management Act, like most of the other nature preservation statutes, also takes an anthropocentric approach.

g. Historic and cultural resources

The protection of historic and cultural resources is mentioned in the context of the fundamental principles of § 2 I Nr. 13 BNatSchG. These values are thus protected as far as the objectives of the Federal Nature Conservation Act are concerned. There is no federal legislative power for regulations on this issue in any other context, but there is some legislation on the Länder level. Since those regulations were adopted at different times and vary from region to region, they cannot be outlined within the scope of this paper.

IV. IMPLEMENTATION AND PROCEDURES

A. ENVIRONMENTAL LIABILITY

For a long time, environmental liability in Germany was rather limited. It arose under different statutory provisions, general civil code provisions, and special environmental statutes which required different assumptions and imposed different standards.149

Special environmental liability provisions are contained, for example, in the federal Water Act and the Federal Pollution Control Act. As mentioned above, under § 22 WHG, strict, joint and several liability affects the polluter, if discharge of pollutants into waters has caused damage.150 Similarly, § 14 BImSchG provides for strict liability for damages caused by polluting emissions.

Strict liability under civil code provisions can arise in private relationships, under § 906 BGB, whereas under tort law an unlawful and at least negligent injury must be alleged. The burden of proof is on the plaintiff.

149. Scherer, supra note 89, at 90-91.
150. VERSTEYL, supra note 101, at 253 et seq.
Since 1991, a new “Environmental Liability Act” - Umwelthaftungsgesetz (UmweltHG) - has come into effect and substantially changed the legal situation. It provides for strict liability of owners and operators of numerous kinds of facilities which are listed in an appendix to the act and include virtually all economic enterprises which require a permit under the Federal Pollution Control Act. More far-reaching than traditional sources of liability, the Environmental Liability Act applies to damages which are caused by environmental effects emanating from one of the listed facilities or undertakings, not only from those currently in operation but also those which are no longer or not yet operating, under §§ 1 and 2 UmweltHG. The act contains a presumption of causality, under § 6 UmweltHG, thus easing the plaintiff's burden of proof.

Sections 8 and 9 UmweltHG impose obligations on public authorities as well as operators of facilities to provide information about victims of environmental accidents as far as this is necessary to enable them to file their claims. This represents a significant difference from the traditional legal situation in which pursuing claims in the absence of legal provisions comparable to the U.S. Freedom of Information Act was often hampered.

The Environmental Liability Act, under § 15 UmweltHG, limits liability to DM 160 millions and requires mandatory insurance, under § 19 UmweltHG, for particularly hazardous undertakings.

Overall, these newly codified environmental liability provisions, which are applied in addition to the traditional grounds of liability, significantly ease the claiming of compensation for environmental damages.

The increasing complexity of production processes and their potentially detrimental environmental effects seem to require risk minimizing procedures. In response, an environ-

152. VERSTEYL, supra note 101, at 257.
153. Scherer, supra note 89, at 92.
mental auditing procedure has been developed that is currently being introduced throughout the EU. However, the appropriate procedures have not yet been applied for a sufficient length of time to allow an assessment of their effectiveness.

B. CRIMINAL PROSECUTION

Almost all of the environmental statutes contain provisions that allow the prosecution of violations as a summary offense. Besides that, violations can be prosecuted as crimes under the Federal Criminal Act, which provides for the possibility of imposing fines or imprisonment, depending on the seriousness of the case.

C. CITIZEN PARTICIPATION

Since there is no citizen suit provision in German environmental law, citizen participation is mostly limited to political participation in planning procedures. Nevertheless, citizen groups have considerable influence on public opinion and, thus, on the political parties, especially the Green Party, the programmatic commitment of which is focused on environmental protection and preservation objectives and legislative and administrative decisions.

V. CONCLUSION

A rough comparison with U.S. environmental law shows that Germany's different political tradition results in a significantly different approach to this field of law. German environmental law, much more than U.S. law, focuses on enforcement through administrative authorities, which can be considered an advantage in some respects but a disadvantage in others.

Environmental legislation in Germany is already highly comprehensive and still increasing in density, since it is com-

154. See Das...oko-Audit kommt im April, FAZ, Jan. 18, 1995.
155. See C. Brockmann, Die Europäer werden grün, and F. Ebinger, Wer hört auf die Umwelt?, both in FAZ, May 9, 1995, Nr. 197, at B5.
considered by government as well as the public to be a political priority. Enforcement, moreover, is one of Germany’s traditional strengths.

Public awareness of environmental problems is increasing enormously and so many people eagerly support conservation measures, especially those which have simple and directly visible effects, as for example waste reduction through separate collection of recyclable wastes.

Nevertheless, lack of information often impedes understanding of the many dimensions and causal interconnection of ecological problems as well as of their connections to production and consumption patterns. Furthermore, lack of knowledge of the conflicting interests involved can hamper the effective implementation of legislative guidelines and achievement of political goals. Industrial interests, for example, continue to impede the large-scale exploration and exploitation of alternative, environmentally less harmful sources of energy as well as the internalization of environmental costs into energy prices, a measure that clearly would help relieve environmental stress.

A further democratization of administrative procedures to provide easier access to information might lead to more public participation and so be a reasonable and effective way to further improve legal protection of the environment in Germany.

However, the environmental situation in Germany shows that effective protection of the environment, based on a comprehensive regulatory and enforcement system, is possible even in a part of the world as densely populated and highly industrialized as Central Europe.\(^\text{156}\)

\(^{156}\) The author wishes to acknowledge the following sources which provided additional information addressed in the text: Wolfgang Renzsch, *German Federalism in Historical Perspective: Federalism as a Substitute for a National State*, 19 PUBLIUS, THE JOURNAL OF FEDERALISM, Fall 1989, No. 4 (historical origins of German law) and INTER NATIONES, PROTECTING THE ENVIRONMENT FOR THE SAKE OF OUR COMMON FUTURE 15 (Bonn: INTER NATIONES Press 1993) (data on operable landfills).