

CHAPTER 1

INTRODUCTION

IMPORTANCE OF THE STUDY OF THE ENVIRONMENT FOR HUMANS

The study of the environment is not just important for humans; it is essential. If we humans are to continue to survive and prosper, we must understand how our current use of environmental resources affects our ability to use and benefit from those resources both today and in the future. Our environment provides the sources of our livelihood and enjoyment of life, as well as sinks for the disposal of our waste products. Obviously, we humans could not survive in a vacuum, yet we often ignore the value that environmental resources hold, whether those be the foodstuffs that we consume, the lumber that we use to build our homes, or the psychic enjoyment that we receive from viewing a pristine valley.

The terms *environment* and *natural resources* are commonly used, but not always with clarity of meaning; therefore, we begin by defining these terms. We use 'natural resources' to refer to all land resources, that is, the soil and earth itself; the waters that run on the ground, under the ground, and in the sea; the air that encircles the earth, everything that grows on the land, such as crops, trees, wildlife; everything that grows in the seas, such as fish; and the resources that lie under the land, such as silver and iron. 'Environment' includes all natural resources but is more encompassing. Our environment is the capsule in which we live. It surrounds us, sustains and nurtures us, and provides us with not just the basic requirements of living but also with the amenities and pleasures associated with modern life. Thus, our environment includes our community, the structure and beauty of our buildings and city parks, the beaches and mountains in which we vacation, and the places in which we work and study. Our environment also includes our experiences with traffic jams, abandoned tenements, and landfills. Thus, 'environment' encompasses the entire context that defines how we live and how we perceive our lives. We cannot separate ourselves from the environment because we are a part of it; we provide input into the environment and take resources from the environment as part of our existence.

Natural resources and our environment determine how we survive as individuals and as communities. We build our homes on the land and rely on it to provide raw materials and groundwater. The earth provides the source of most human food, livestock feed, fiber, and fuel. Air is a resource on which all life on earth depends. Yet while our environment is so fundamentally necessary to our living, we also use it as a sink in which to place our wastes. Discovering how to strike a balance between using our natural resources and conserving them for the future is a lesson we are currently striving to learn.

Our environment is a significant determinant of human health. The environment is so important to our health that, worldwide, 25 to 30 percent of disease can be attributed to environmental factors.¹ In Europe, an estimated sixty thousand deaths per year may be due to long-term exposure to air pollutants; increased incidences of skin cancer have been linked to decreases in stratospheric ozone levels.²

The 1972 United Nations Conference on the Human Environment (also known as the Stockholm Conference) addressed the need for a set of common principles to guide the people of the world in preserving and maintaining their environment. Perhaps the Stockholm Declaration describes the relationship between man and nature best when it states,

Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights—even the right to life itself.³

Summary of the Book

This book addresses how the environment can be managed to sustain human life and pursuits, while protecting our environmental heritage for use today and in the future. We do this within the context of examining environmental policy in the European Union. This first chapter describes the European environment and the recent history of human life in Europe. We address the geological basis of the environment for human endeavor, as well as the forms of human activity in modern Europe. We then turn toward regime theory as an

approach for considering methods to manage the environment. We discuss the value of regime theory for providing a basis for regulating and protecting our environment.

Chapter 2 examines the institutional environment of the European Union, that is the structures and rules that regulate environmental policymaking. Because the public guides institutional policymaking, we conclude chapter 2 with an examination of the role of the public in the European Union.

Chapter 3 focuses specifically on the European environment and actions designed to promote environmental protection. We examine the Environmental Action Programs established in the European Union (EU) to pursue environmental goals and the different foci of those programs over time.

Chapter 4 examines cases of challenges and successes in EU environmental policy. We consider cases involving fisheries, biodiversity and wildlife protection, transport, and economic development in rural areas. We provide an analysis of the cases, noting the particular economic incentives at play in each.

Chapter 5 provides a comparative analysis of the EU and the United States in environmental policy. We examine environmental liability policy, environmental protection, and water policy. We find that there are similarities but also differences between the two.

Chapter 6 provides our conclusions regarding the efforts of the EU to address environmental concerns. We return to regime theory as a method of addressing environmental protection in the international arena.

OVERVIEW OF EUROPE

The European Continent

The continent of Europe consists of forty independent countries and includes Russia west of the Ural Mountains and European Turkey. Of these European nations, fifteen are currently members of the European Union, although several eastern and central European nations could join the union over the next few years. In this section, we will discuss the European continent, considering both its physical and socioeconomic structure. We then review the major farming and manufacturing regions in Europe.

Physical Attributes. The European continent covers over 10 million square kilometers (4 million square miles), about 7 percent of the world's total land area.⁴ Approximately three-fifths of Europe's land is close to sea level, at less than six hundred feet in elevation; one-third is between six hundred and three thousand feet in elevation. Because of its location, the continent receives the tempering effects of the marine influences from nearby

oceans and seas. Continental Europe includes twenty-four thousand miles of coastlands; numerous islands lay off the coast.

The geography of Europe varies from mountains to plains, deserts, and valleys. The geography of northern Europe (Britain, Ireland, and Scandinavia) derives from ancient mountains. The large central part of Europe, from the Netherlands, Belgium and France to Germany, consists of lowlands. The dry southern portion of Europe consists of rugged mountains and plateaus. The eastern European countries consist of a relatively flat plateau. This area includes the former republics of the Soviet Union (Estonia, Latvia, Lithuania, Belarus, Ukraine, Moldova, Armenia, Azerbaijan, and Georgia). Eastern Europe also covers Bulgaria, Czech Republic, Slovakia, Hungary, Poland, Romania, and Albania. Europe has many rivers, most of which drain to the Atlantic; lakes make up only about 2 percent of the surface area.⁵ Many rivers are interconnected by canals and are used in transport.

The climate of most of Europe is rather moderate. Western Europe has a maritime climate, with plentiful rainfall, (up to five hundred centimeters [two hundred inches] per year in Scotland and Wales), and mild temperatures. Central Europe has colder winters and warm summers; rainfall averages fifty to one hundred centimeters (twenty to forty inches).⁶ Northeastern Europe has a dryer climate and long, cold winters and hot summers. The southern coast has a Mediterranean climate and moderate rainfall (twenty to forty inches). Winters in the south are mild and wet; summers are hot and dry.

Five types of vegetation are found in Europe. In the far north, including Scandinavia, Russia, and Iceland, where soils are swampy and poor, tundra is found. This area is covered by grasses and lichens and inhabited by reindeer, Arctic fox, and bear. The boreal zone of northern Russia and Scandinavia contains the most extensive forest in Europe, consisting of spruce, fir, pine, willow, and larch. Soils in this area tend to be acid and infertile. The deciduous zone from the British Isles to central European Russia consists of mixed forests of oak, maple, pine, beech, birch, elm, and linden. Soils in this area are suitable for crops, and agriculture is widespread. Grasslands naturally cover the steppes of Ukraine and southeastern Russia; however, the natural cover has been heavily replaced by croplands. Southern Europe's Mediterranean zone contains forests and scrub; however, most of the natural vegetation has been replaced by crops (notably, wheat, olives, and grapes).

Social Economic Environment

Europe's people represent approximately 15 percent of the total world population. The average birth and death rates of fourteen and nine per thousand, respectively, result in an annual population growth rate of 0.4 percent. However, many of the northern and western European countries have popu-

lation growth rates near zero or below replacement rates.⁷ Europe is the second most densely populated continent on the planet but has the lowest rate of natural increase. The average population density is approximately 65 per square kilometer (168 per square mile), although this varies from 50 per square kilometer (129 per square mile) in the Nordic countries (Norway, Sweden, and Finland) to 113 per square kilometer (396) in western Europe. The average for the United States is 25 per square kilometer (65) and for the world, 34 (88).⁸ Most Europeans belong to the Caucasoid race. The population of Europe is highly urbanized, with the United Kingdom and Germany having the highest rates of urbanization and Albania and Portugal being the least urbanized.

There are approximately sixty languages native to Europe. The Germanic, Slavic, and Romance language groups are Indo-European, as are the Greek, Albanian, Celtic, and Baltic. The Finnish, Lapp, Karelian, Estonian, Hungarian, and Turkic languages are Ural-Altai. Belgium has two language groups, the Walloons and the Flemish. Many Europeans are fluent in more than one language, with English, French, German, and Spanish being the most common second languages.

The standard of living in Europe is high. Literacy rates are also high (over 95 percent) as education systems are well developed; the proportion of children in primary school is nearly 100 percent.⁹ The average life expectancy ranges from 66.8 years for men in Poland to 80.7 years for women in Switzerland.¹⁰ Calorie intake is the highest in the world, an average of thirty-five hundred calories a day per person.¹¹ The average per capita income in Europe is among the world's highest, although the southern European nations lag somewhat behind those of the north.

The religious affiliation of Europe's population varies, but the population is predominately Christian in religion. Catholicism is dominant in Spain, Portugal, Italy, France, Ireland, southern Germany, southern Belgium, and from Lithuania to Poland. Protestantism predominates in northern European countries of the United Kingdom, Scandinavia, northern Germany, and the Netherlands. The Northern states of Finland, Norway, and Sweden are predominately Lutheran. Groups of Muslims are found throughout Europe, primarily in southeastern European countries of Albania, Bulgaria, and European Turkey.¹² People who practice Judaism are scattered throughout Europe, but are most evident in the cities of central and eastern Europe.

Occupational activities vary, depending on the natural resources and industrial development of the area. Major occupations in the north are agriculture, fishing, forestry, mining, and industry. In the southern European countries of Spain, Italy, Greece, Portugal, and European Turkey, the major occupation is agriculture, but manufacturing is developing rapidly.

The governmental structure of the European states varies. Most of the European nations have socialist democratic governments. Great Britain is a constitutional monarchy, but sovereignty rests in Parliament. Norway, Sweden, and Denmark have figurehead monarchies.

Summary of Major Farming Regions and Types of Farming. Approximately one-third of Europe is considered arable. Another third is forested. Since the mid-1900s, about half the arable land has been used to grow cereals, principally wheat and barley. Less than one-fifth of the total land area of Europe is used for pasture. Major farm animals are pigs, sheep, and cattle; production varies across Europe. On the northern European plain pasture, oats, and barley predominate, along with milk and beef production, wheat, vegetables, potatoes, and flowers. Southern Europe produces fruits, vegetables, olives, and wines. Wheat and corn are major products in eastern Europe. Poland produces rye, potatoes, and livestock. Ukraine also produces livestock and potatoes, as well as sugar beets. Short growing seasons in the North limit agriculture to some extent; commercial forests are an important activity in this area. Forestry is concentrated in Russia and Scandinavia.

Agriculture employs less than one-eighth of the workforce in most European countries. In the West and South, where soils are poor and rainfall is low, small family farms predominate. Agriculture in the South remains largely unmechanized compared to the countries of the North.

Fishing is an important occupation in the nations that border the seas. Based on total catch, Russia, Denmark, Norway, Iceland, and Spain are the leading fishing nations.¹³ The most productive European fisheries are in the North Atlantic Ocean, the Norwegian Sea, the North Sea, and the Bay of Biscay.

Major Industries and Manufacturing Regions. Europe was the first region in the world to industrialize and develop a modern economy. The continent possessed iron ore for industry and waterpower and coal for energy. Approximately 35 to 40 percent of the labor force in most western European countries is engaged in industry and manufacturing activities; in southern and eastern Europe, agriculture is more important. The major European industrial powers are the United Kingdom, Germany, and France. The Netherlands, Belgium, Luxembourg, Switzerland, and Austria are also heavily industrialized. While manufacturing is still an important activity, from the early 1990s, the workforce has been turning more and more toward service industries such as banking and financial services. Europe represents half the world's international trade, with exports representing over 20 percent of the gross national product of the EU.

Western Europe manufactures high-quality machine and metal products, electrical goods, synthetic textiles, petrochemicals, motor vehicles, aircraft, computers, and consumer electronics. Southern Europe has limited resources of coal, iron ore, and petroleum. The states of eastern Europe have major mineral resources of coal, iron ore, petroleum, natural gas, and bauxite and produce basic industrial products, including iron, steel, and textiles. Among the eastern European states, the Czech Republic is the leading industrial nation.

Mineral industries in Europe are largely based on coal (mined in European Russia, the Ukraine, Germany, Poland, the Czech Republic, and the United Kingdom), although many coalfields are becoming exhausted. Iron ore is mined in Russia, the Ukraine, France, Sweden, and Spain. Petroleum production is confined to the North Sea area of the United Kingdom and Norway and to oilfields in Romania and Russia. The Netherlands, the United Kingdom, and Romania are the leading European producers of natural gas.

One-fourth of the world's total electricity is generated in Europe, mostly from thermal-power plants; about 25 percent is from nuclear power plants. France is the highest consumer of nuclear energy, with about 70 percent of its electricity coming from nuclear production.¹⁴

Major European Environment Problems

Because of the long history of human population in Europe, as well as the denseness of population of some parts of Europe, a variety of environmental problems have become the focus of environmental policymaking in the EU. Next, we briefly describe some of the major environmental problems facing Europe.

Climate Change. Average annual air temperatures in Europe increased about 0.3 degrees centigrade during the 1990s, with climate change models predicting further increases of up to 2 degrees by 2100. This potential temperature increase brings with it the threat of droughts, more frequent and more intense storms, and changes in agricultural productivity. In order to avert such an increase in average temperatures, the emissions of greenhouse (carbon dioxide, methane, nitrous oxide, and halogenated compounds) by the industrialized nations will need to be reduced by at least 30 to 55 percent from 1990 levels by 2010.¹⁵

In Europe, the energy industry, through its burning of fossil fuels, was the biggest contributor of carbon dioxide emissions (the leading contributor to climate change) in the late 1990s and early 2000s, generating about one-

third of total carbon dioxide emissions in the EU. Other emissions are produced in about equal proportions from household and commercial sectors, transport, and industry. In order to reduce the emissions of climate-changing emissions, the EU set the goal, under the 1997 Kyoto Protocol, of an 8 percent reduction by 2010. In addition, several member states (including Denmark, Austria, Finland, the Netherlands, and Sweden) have introduced energy/carbon taxes to reduce emissions.

Stratospheric Ozone Depletion. The depletion of the ozone layer in the late twentieth century resulted from enhanced levels of chlorine and bromine compounds in the stratosphere due to the use of chlorofluorocarbons (CFCs). CFCs are used as coolants in such modern devices as refrigerators, air conditioners, aerosol propellants, foaming and cleansing agents; ozone depleting substances are also present as halons used in fire extinguishers.¹⁶ The Montreal Protocol and its extensions have been very successful in reducing the emissions of ozone-depleting substances into the atmosphere. However, because many ozone-depleting substances persist in the upper atmosphere, the ozone-depleting potential is not expected to reach its maximum until between 2000 and 2010.¹⁷ After that, it will take many decades for the ozone level to recover.

Tropospheric Ozone and Summer Smog. Tropospheric ozone refers to ozone concentrations in the troposphere, which exists from ground level to ten to fifteen kilometers (approximately six to nine miles) above the earth. Emissions from nitrogen oxides in industry and vehicles have led to an increase in the tropospheric ozone concentration of about three to four times since 1950.¹⁸ High levels of tropospheric ozone negatively affect both human health and ecosystems. Frequently threshold levels (above which negative effects can be expected) are exceeded in many European countries, causing respiratory problems and reduced pulmonary function. High levels also damage vegetation, reducing yields and seed production.

The European Commission has developed several measures designed to reduce the level of ozone emissions in the troposphere. These include directives setting emission ceilings and reductions in emission levels; however, little success has been achieved as of 2003.

Acidification. Acidification refers to the effects of acid deposition from the emissions of sulphur dioxide, nitrogen oxides, and ammonia in the water and on soils. When fuels such as coal and oil undergo combustion in autos, industry, and power plants, emissions are carried into the air, where they remain for up to several days, and can be carried over long distances, affecting regions outside their area of origin. Acidification causes defoliation

of trees, declines in fish stocks, and changes in soil chemistry. It also damages man-made structures, such as marble buildings and stained glass. Acidification above critical levels (the levels of deposition above which harmful long-term effects can be expected) remains a problem in about 10 percent of Europe, mostly in northern and central Europe.¹⁹

Success has been made in the reduction of sulphur dioxide emissions in the European Union, with a 50 percent reduction between 1980 and 1995. However, as the transport section is a major contributor of nitrogen oxide emissions, the growth in the use of automobiles has offset the benefits achieved from improving auto engines and exhaust systems. Thus, there continues to be a problem with acidification in the EU.

Chemicals. Huge numbers of chemicals are in use throughout Europe; the European Inventory of Existing Chemical Substances lists over one hundred thousand chemical compounds.²⁰ This is a significant concern because the chemical industry in western Europe grew faster than GDP in the late 1990s, yet the knowledge of how many chemicals are distributed and accumulate, as well as their impact on humans and the environment, have not been fully identified. In addition, the toxicity of many chemicals, especially when combined with other chemicals, is not fully known.

Heavy metals (notably, cadmium, mercury, and lead) and persistent organic pollutants (POPs), such as DDT, PCB, and dioxins, are of significant concern because these have been associated with reproductive disturbances in wildlife and humans, although causal links have not been established. Use of these chemicals has been addressed in the EU, and emissions of heavy metals are decreasing due to such steps forward as the reduction of lead in gasoline, cleaner technologies in the metal industry, and improved wastewater treatments. Control of the concentration of POPs in fishing waters has been less successful, partially due to the persistent nature of these chemicals.

Waste. Landfills are the dominant form of waste management in most European countries. About 420 kilograms (about 1,000 pounds) per person of municipal waste are generated each year in the EU member states, although the reduction of waste through recycling is growing. About 42 million tons per year of hazardous waste is generated every year, mostly in Germany and France. A large portion of the hazardous waste is the result of industrial activities, mining, and the clean up of contaminated sites. However, hazardous waste also results from consumer use of nickel-cadmium batteries, organic cleaning solvents, paints, and car engine oils.

Many legislative instruments have been implemented to harmonize waste legislation among the member states of the EU; however, the level of implementation, and therefore success, has varied among the states.

Continuing efforts emphasize cleaner technologies, improved product design, and material substitution.

Biodiversity. The pressure on the environment from human activity has been steadily increasing as human populations grow. Wild animal and bird species are declining under pressure from human encroachment and manipulation of the environment. Wetland loss has been significant in southern Europe due to land reclamation, pollution, drainage, and urbanization.

Urbanization and impacts from agriculture and forestry cause significant stress on the natural environment. While the total forested area is actually increasing, the use of exotic species is also increasing, replacing older, natural woodlands. More intensive agriculture, with higher use of chemical fertilizers and pesticides, has negatively affected the diversity of plant and animal life. The NATURA 2000 network (discussed in chapter 5) has been designed to protect diversity within the EU; however, implementation has been somewhat slow.

Inland and Marine Waters. Europe's waters are facing increasing pressure for various uses, from drinking and recreation to industry and agriculture. Groundwater quality faces its greatest threat from the runoff associated with nitrate use in agricultural production. Pesticide levels in groundwaters in some areas commonly exceed EU standards. In addition, pollution from heavy metals, hydrocarbons, and chlorinated hydrocarbons endanger water supplies. Several policy directives have addressed water pollution in the EU, including the recent Water Management Directive (discussed in chapter 4).

Marine waters face similar problems. Many waters have been overfished to the extent that some stocks are seriously depleted. (We discuss the North Sea fisheries in chapter 5.) In addition, eutrophication, that is, the deposition of mineral and organic nutrients in waters that promote the growth of plant life, especially algae, is a problem in many European seas. Eutrophication reduces the dissolved oxygen content of the water and leads to the extinction of organisms that naturally exist in the waters. The periodically occurring oil spills also harm marine life. Several EU initiatives have focused on sustainable development of coastal areas and the reduction of marine pollution.

Soil Degradation. In many areas, particularly around the Mediterranean, soil erosion and salinization are serious problems. Soil erosion has been addressed by policies aimed at reforestation. Salinization results from the use of water for irrigation, industrial, and urban development and causes lowered crop yields. Policies aimed at reducing salinization have

not been developed in the EU as of 2003. The history of heavy industry in many areas has also led to soil degradation; over three hundred thousand contaminated soil sites have been identified. The EU's recent policies on environmental liability (discussed in chapter 4) have addressed the prevention of contaminated sites and the costs of cleaning up those sites.

Urban Environment. The urbanization of Europe's population has continued through the late twentieth century and early twenty-first century. As a result, many cities are experiencing lowered air quality, traffic congestion, and loss of green space. In addition, many European cities are straining their groundwater resources as the urban population grows.

Many European cities have focused on sustainable development, as addressed in Agenda 21; many have joined the European Sustainable Cities and Towns Campaign. Agenda 21, the Rio Declaration on Environment and Development, was adopted at the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. It provides a plan of action designed to address human impacts on the environment, noting, "In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it."²¹

The European Sustainable Cities and Towns Campaign began in 1994 following the First European Conference on Sustainable Cities and Towns, held in Aalborg, Denmark. The Aalborg Charter, developed at the Conference, provides a policy framework for the initiation of processes designed to lead to sustainable development plans at the local level. As of 2003, over 1860 local and regional European authorities are signatories to the Charter.²² General funding for the campaign is provided by the Environment Directorate General of the European Commission, the Italian Association for Local Agenda 21, the City of Hannover, the City of Malmö, and the Barcelona City Council and Diputació. Local authorities, the members of the Steering Committee of the Campaign, and the European Commission provide for funding for specific projects.

Technological and Natural Hazards. Technological hazards include events such as accidents at nuclear installations, marine accidents, and industrial accidents. The European Council defines accidents as "sudden, unexpected, unplanned events, resulting from uncontrolled developments during an industrial activity, which actually or potentially cause serious immediate or delayed adverse affects to a number of people inside and/or outside the installation."²³ Data regarding technological hazards in Europe are not readily available, especially in the eastern and central European nations. However, these hazards are important because of their potential effects.

Events such as oil spills, while infrequent, can cause major environmental damage and result in huge clean-up costs. In order to respond to technological hazards, communications networks have been established and systems of emergency response developed in most European countries.

Natural hazards include events such as floods, blizzards, hailstorms, earthquakes, hurricanes, and heat waves. Damage from natural disasters has been increasing over the last fifty years, possibly due to human manipulation of the natural environment. Increased population densities and concentrations of industrial activity contribute to the potential impact of natural disasters in developed areas. While these hazards are obviously difficult to control, many European countries have taken steps to increase public awareness and knowledge of how to respond to such disasters.

Summary

As noted above, transport, energy, and agriculture are key forces that impact the environment. While EU environmental policies have addressed these issues, the development of the policies and their implementation has varied. These issues will be addressed as we progress through the book. However, before turning to these more specific issues, we first provide a general and brief overview of Europe.

WHAT/WHO IS EUROPE

Europe covers a variety of geological areas, as noted earlier. It includes numerous languages and cultures so that integration of these has at times been challenging. Nevertheless, the integration of European nations under the umbrella of the European Union has succeeded in achieving both economic and environmental goals. Later in the book we discuss the history of the integration of the European nations and the membership of the European Union today.

Members of the European Union

As of April 2003, there were fifteen member states in the European Union: Belgium, the Netherlands, Luxembourg, France, Italy, Germany, Britain, Ireland, Denmark, Greece, Spain, Portugal, Austria, Finland, and Sweden. Several nations of central and eastern Europe have petitioned to join the union. These candidate countries include Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, and Turkey.

Brief History of Region

Prior to the Congress of Vienna in 1815, which strove to settle various European political concerns, Europe was periodically disturbed by war gen-

erated by the various monarchs' quests for territory and power. In 1870 the German states joined to form a powerful union. By 1914, Germany had aligned with Austria-Hungary and was at war with France, Britain, and Russia. The outcome of the war led to the formation of several new nations in central and eastern Europe, as well as the creation of the Soviet Union. By 1939, another war was mounting in Europe, with Nazi Germany being defeated by an alliance of the Soviet Union, Britain, and the United States. The outcome led to the establishment of Soviet communism in many of the eastern and central European nations.

After World War II, some of the smaller European nations joined together to promote economic development. The first post-World War II integration of European nations began in 1948, when the Netherlands, Belgium, and Luxembourg created the Benelux Union as a customs union, providing for free trade among themselves and a common set of tariffs to the rest of the world. In 1951 the three Benelux states joined three others—France, Italy, and the Federal Republic of Germany (West Germany)—to sign the Treaty of Paris, forming the European Coal and Steel Community (ECSC). Integration continued when the Treaty of Rome, effective 1 January 1958, created two additional communities, the European Atomic Energy Community (or Euratom, designed to develop peaceful uses of atomic energy) and the European Economic Community (EEC, effective 1 January 1958). Besides eliminating customs duties among members and establishing a common customs tariff toward other nations, the EEC Treaty also provided for the creation of the European Investment Bank to facilitate economic expansion among the member nations. The ECSC, Euratom, and EEC agreed to be served by a single council of ministers, assembly, and court of justice. A few years later these three communities were merged into the European Communities, or as they are more commonly known, the European Community (effective 1 July 1967).²⁴ Additional members soon joined: in 1973, Britain, Ireland, and Denmark; in 1981, Greece; and in 1986, Spain and Portugal. Austria, Finland, and Sweden joined the new union in 1995. As of this writing plans are underway to add several central and eastern European countries, former members of the Soviet block, to the European Community (see above).

INTRODUCTION TO REGIME THEORY

As noted above, we will be examining environmental management in the European Union from the standpoint of regime theory. This section provides the theoretical basis for our study. It presents regime theory as an approach to evaluating the management of environmental resources. We first consider the nature of environmental resources. Then we examine theoretical approaches for managing environmental resources. Several approaches used

for analyzing international regimes are considered. These include institutionalism, historical materialism, cognitivism, and neo-realism. The institutionalist approach is further subdivided into three alternatives: privatization, cooperative management, and public management. In the remainder of the book, we will develop our examination of the European Union as a regime.

The Nature of Environmental Resource Management

The need to collectively manage environmental resources used in common (common pool resources) has long been a challenge to mankind. Efforts to develop management systems for common pool resources date back hundreds of years. Records for the management of irrigation systems in Spain go as far back as 1435.²⁵ Thus, while these issues are not new, they are becoming more pressing as environmental degradation has worsened throughout the world in recent years.²⁶ Concern over environmental resources has resulted in numerous international agreements.²⁷

There are different types or levels of common pool environmental resources. Many common pool resources are local in nature, such as the Spanish irrigation systems noted above. Some are more regional in scale, such as the Mediterranean Ocean, or Antarctica, while others are truly more global—the atmosphere and geostationary orbits, for example. Regardless of the level of environmental resource being considered, all share similar limits to their use that require some form of management.

Environmental resources may be either sources for production or consumption uses or sinks where wastes are deposited. Both source and sink uses can result in environmental problems. If too many people use a lake as a sink, eventually the sink will be unavailable for other uses, such as fishing. Thus it is necessary to develop a method for allocating resources for various purposes among competitive users. Underlying the various approaches to the management of our common environment lie the theoretical bases of analysis that attempt to explain how the various actors associated with the resource behave. Several theoretical approaches describing the behaviors associated with the management of environmental resources are examined in the next section.

Institutionalism

Institutionalism in political science emphasizes the role of institutional structures in imposing order.²⁸ Institutions, such as laws and rules, provide organization and avenues for control of political actors. In analyzing regimes associated with the environment, institutionalism emphasizes the structures associated with a regime, that is, norms, rules, and decision-

making procedures, for determining the behavior of actors. Institutionalists focus on the interests or the context under which cooperation may be sought and attained. Actors are assumed to be utility maximizers, generally with incomplete information.²⁹

There are three forms that institutional approaches for determining environmental resource use may take: privatization, cooperative (sometimes referred to as “collective”) management, and public management. Public management of resources can occur at the national level, at the international level through an intergovernmental agency, or by a supranational unit. Each of these will be examined in turn.

Privatization. Privatization applies the institution of the market for determining the value, use, and allocation of environmental resources. Under a market-oriented approach to resource management, environmental resources would be privatized; that is, they would no longer be owned in common but would be owned by an individual or groups of individuals and would thus become private property. The owner(s) would then make any decisions regarding the use of the resource.

Privatization is realistically only applicable to local or regional common pool resources that can be effectively limited by boundaries, such as a lake or timber reserve. Resources that cannot be effectively contained and thus controlled would be subject to use by interlopers who do not own but wish to use the resource, resulting in a state similar to that of the uncontrolled commons.

Arguments supporting privatization hold that the assignment of property rights is the most efficient means of internalizing negative environmental externalities.³⁰ Privatization also provides incentives for the owner to appropriately manage the resource. However, simply changing the ownership characteristics of the resource will not necessarily improve resource use or prevent its destruction. The incentives associated with either private or public ownership must be evaluated to determine possible resource allocation issues that may occur.³¹

Cooperative Management. Privatization approaches may not be applicable to nonstationary resources (such as fisheries) or resources that are owned and used in common. In these cases, cooperative management by the users of common pool resources may be an effective approach to management of the resource. Those with firsthand knowledge of the resource are the most likely to be able to manage that resource appropriately in the long run as they have a stake in ensuring its availability for use in the future. Cooperative management may be able to effectively allocate use of the resource, while controlling encroachment on the resource.

Cooperative management has been shown to be effective in the management of small-scale common pool resources with clearly defined boundaries.³² Examples include communal use of high mountain meadows of Switzerland, communal land use in Japanese villages, and community irrigation systems in the Philippines.³³ In these cases, the resource users have the potential to substantially harm each other, depending on the manner of their resource use but do not have the potential to harm others external to the community. In order for cooperative management to be viable, the users must be able to come to agreement regarding the use of the resource. Cooperative resource users must have common interests and believe that they can gain through cooperation.³⁴ In addition, cooperative users of the resource must be able to monitor resource use and be able to apply sanctions to violators.³⁵

There are limits to group size for the cooperative management of resources.³⁶ In larger groups the independent actions of individuals tend to have lesser effects, so that larger groups are not as conducive to cooperative activities such as common pool resource management. In large groups it is easier to free-ride and otherwise violate the necessary terms of cooperative arrangements. There are also higher bargaining costs associated with voluntary arrangements involving larger numbers of members.³⁷

Public Management of the Commons. As noted before, privatization and cooperative management of common pool resources may not be viable alternatives for the management of environmental resources. In cases where the boundaries of the resource are undefined (e.g., fisheries) or in cases where the results of resource use cross national boundaries (acid rain) intervention and/or management by a government or governments acting jointly, or even a supranational organization, may be necessary to achieve environmental management goals.

Most individual nations have environmental laws and regulations to deal with various environmental problems. The strength and degree of intervention associated with these varies from state to state and among various regions of the world. The developing nations tend to be much more tolerant regarding environmental quality, preferring to concentrate instead on development. Developed countries, on the other hand, have higher levels of wealth available to apply to environmental quality improvements. However, even within developed countries, various factions (e.g., nongovernmental organizations, business interests) generally have different objectives regarding environmental quality. When developed and developing countries come together to try to negotiate arrangements for the use and maintenance of environmental resources, the various perspectives and objectives they bring with them often lead to difficulties. The next section will consider joint man-

agement approaches at the international level from the institutionalist perspective of regime theory.

Supranational Management: International Regimes

This section will address the topic of international regimes. We will examine the nature of environmental regimes, how regimes can help solve environmental problems, and conditions that affect the effectiveness of regimes.

Regime theory is one approach that attempts to explain how actors behave. Regimes are social institutions that serve to direct the interactions of actors in defined situations. These behaviors may be based on norms, principles, rules, and/or decision-making procedures agreed upon by the relevant actors, in this case, nations. Generally international regimes cover specific issues areas and are determined by agreements among specific nations.³⁸

International regimes, as suggested above, often arise in response to problems associated with environmental resources occurring at the international level.³⁹ Regimes offer a method for solving collective problems that cannot be solved by nations individually, but instead require some form of supranational structure. Regimes can provide avenues for improved environmental management by providing methods for collective choice, standard setting, rule making, compliance monitoring, and knowledge generation.⁴⁰ Regimes can also become institutions that shape their members' interests and lead to joint or collaborative projects; for example, members of the European Union often adjust national policies in response to Union directives.

The Role of International Organizations in Environmental Regimes

International organizations play a central role in international environmental regimes. For example, the United Nations has been particularly active in generating international responses to environmental concerns. International institutions provide contexts and sets of procedures through which representatives can develop common understandings and shared meanings.⁴¹ International regimes may also stimulate societal learning by pooling existing capacities, by making explicit the goals of participating states, and by increasing awareness of environmental issues.⁴²

Some scholars argue that international environmental concerns have resulted in the transference of power away from the nation-state as a locus of governance and toward local, regional, and particularly supranational levels of governance.⁴³ When addressing international or transboundary environmental issues, the relative importance of the individual nation-state decreases as the larger global issues take precedence. The World Commission on

Environment and Development report, *Our Common Future*, suggests that states cannot isolate themselves if they hope to effectively address environmental concerns.⁴⁴ Instead they must accustom themselves to increasing interdependence among nations.

The emergence of new international environmental problems and new coalitions of actors has also been found to influence policy formation at the domestic level by altering actors' interests or perceptions.⁴⁵ In China, for example, the influence of international technological information led to new understanding of the possibilities associated with responses to climate change and led China to take on a leadership position among developing countries.⁴⁶ Similarly in the negotiations on the Montreal Protocol, recognition of favorable international market conditions led commercial interests to support the protocol through efforts at both the domestic and international levels.⁴⁷ The CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) regime influenced Zimbabwe's domestic policies. Zimbabwe's leaders realized that non-participation in CITES would be very costly (trade sanctions are imposed against violators). As a result, the African elephant was put on the domestic political agenda. However, once Zimbabwe became a member of the regime it tried to alter CITES goals.⁴⁸ (Weaker states often use their veto power to demand compensation or other forms of favorable treatment.)⁴⁹

Other Theoretical Approaches

In addition to regime theory, there are several other approaches that attempt to explain how nation-state actors behave, for example, realism, neo-realism, and historical materialism. However, these are not as prevalent in environmental literature as regime theory, which we use as our foundation for analysis.

Creating Effective Regimes

The global environment can be considered an international commons, a resource over which two or more members of international society have an interest, but over which none has absolute jurisdiction, for example, the global climate system, open sea fisheries, or international waterways. There are three main options for dealing with the international commons.⁵⁰ The area may be enclosed, preventing overlapping jurisdictions. Alternatively, a supranational or world government may be created to oversee the use of these resources. Finally, codes of conduct can be introduced to direct appropriate behaviors on the part of nations sharing or competing for the use of the resource in question. Regimes function to provide these standards of behavior. This section describes theoretical approaches to creating and managing

regimes. Although regimes can be evaluated on grounds of efficiency, equity, or ecological sustainability, the effectiveness of regimes is often viewed as of particular importance if the regime is to be successful.

Why Are Regimes Formed?

Regimes are formed in order to accomplish tasks that cannot be achieved by actors working individually. This becomes particularly relevant when dealing with the international commons—in situations where environmental resources are entirely or largely outside the jurisdiction of any individual state but valued by two or more of them as resources.⁵¹ These actors realize that they must cooperate in order to achieve their goals. However cooperation is often possible only when parties with competing interests have an opportunity to generate options for mutual gain.⁵² Therefore, regimes must create the necessary conditions for cooperation. For this reason, regimes may be more appropriate and useful when the relevant nations have similar goals and objectives for the environment.

Regimes may act in four capacities.⁵³ They may be predominantly regulative, focusing on the formulation of rules or behavioral prescriptions. They may act as institutions that primarily provide a locus for developing procedures for arriving at collective choices. They may be generative, developing new ways of thinking about problems. Finally, regimes can also become institutions that shape their members' interests and lead to joint or collaborative projects. For example, in environmental matters, members of the European Union have often adjusted national policies in response to union concerns.

Two types of explanation, structural and utilitarian, dominate the literature on regime creation. The structural view considers the potential for cooperation to be related to the structure of the international system. This view is that espoused by the neorealist perspective discussed above and often ties the possibilities for cooperation in the international arena to the existence of a hegemon. The hegemon's norms, principles, and rules are perceived to organize behavior in the system. The hegemon is expected to use its economic or military leverage over other states to bring them into regimes and to coerce them to comply with the constraints of the regime. The role of the United States in setting up trade and monetary regimes after World War II is often cited as an example of this type of regime formation.⁵⁴ However, this theory of regime formation sometimes fails to explain regime structure. For example, the regime for radio spectrum, organized when Britain was the hegemon, ran counter to the British preferences.⁵⁵

The utilitarian explanation for regime creation is based on neoclassical economics and stresses cooperation on the basis of self-interest. Under this

approach, regime members recognize that they are mutually vulnerable and that cooperation will improve joint welfare. Regimes serve to increase information and provide a set of stable expectations.⁵⁶ Utilitarian theory views the problem of the commons as a type of market failure. Consequently, the solution to an international environmental problem is to create a regime that can produce appropriate responses to market failure. Regimes function as institutions that minimize transactions costs and provide for monitoring and enforcement of regime provisions.⁵⁷ Solutions under this approach include such practices as offering transferable pollution rights, with the market determining a market price for such rights.⁵⁸

THE PROCESS OF REGIME FORMATION

While the concerns of the relevant nations are fundamental to the regime formation process, other actors may also be involved. These include international and domestic nongovernmental organizations, which may influence the global environmental policy agenda by lobbying their own or other governments or by lobbying international negotiations. Corporations may also be involved, often lobbying their own domestic government or lobbying delegations to the negotiating conference. Generally, corporations have taken the position of weakening global environmental regimes, for example, in the whaling, ozone protection, logging in tropical forests, and toxic waste trade regimes.⁵⁹ In order for the reader to better understand how regimes develop and the potential roles of various actors, the stages in the regime formation process will now be described.

The first stage of the regime formation process is the evolution of the agenda. This stage focuses on the means by which issues come to international attention. This may occur through the efforts of nongovernmental environmental organizations or other citizen-based groups, as a result of scientific reports, or as a result of reports by various government agencies such as the European Environment Agency (discussed in chapter 3). In the case of environmental concerns, probable causes and the type of action required to correct the problem are identified in this stage. The second stage of regime formation is fact-finding. In this stage, the information needed for determining the scope and direction of the regime is gathered. Next, the bargaining process that creates the regime takes place. This negotiation stage can be critical and illustrates the necessity of developing an arrangement to which the participating nations will agree. Finally, additional bargaining and negotiations that strengthen the regime and reflect new knowledge of the environmental problem may take place. These may include the negotiation of protocols that establish concrete targets and timetables, amendments to existing agreements, or the adoption of stronger actions.⁶⁰ The final phase of

regime formation is to operationalize the regime, completing the establishment of the regime.

However, the culmination of negotiations is only the beginning of the environmental regime thereby created. Once in place, efforts must be made to ensure that the procedures and rules created in the negotiations are carried out during the implementation phase. Some negotiations result in formal, binding agreements, whereas others provide for informal commitments. Some researchers have suggested that the more effective agreement may be the binding form because the signatories to the agreement are bound to meet the stipulations of the agreement. However, other research questions this assessment. The results of a number of case studies suggest that nonbinding agreements may actually be more effective in protecting the environment.⁶¹ Nonbinding instruments may allow for more effective cooperation because states may be more willing to adopt this form of commitment when uncertainty regarding their ability to implement agreed-upon provisions exists. These studies also suggest that nonbinding agreements can be very effective when there is a small group of counties with similar concerns, allowing for deep integration, that is, active cooperation designed to achieve certain goals.⁶² Binding agreements are often found to result in higher compliance rates, but this may simply be due to their less rigorous requirements. Countries may agree to binding treaties only when they are sure that they can meet the requirements of the agreement. Treaties and other legal structures on which regimes can be based are described below.

Legal Structures on Which Regimes Can Be Based

The legal structures utilized to govern regimes are often based on treaty.⁶³ Treaties establish clear rules and procedures for dealing with specific situations. Other, less binding legal structures include conventions, protocols, and codes of conduct. This section describes treaties and the other legal structures on which regimes can be based.

The Vienna Convention on the Law of Treaties governs the construction of global treaties. The convention provides that an agreement will take effect, or enter into force, when a sufficient number of parties have agreed to be bound by it. Various sections are included in a typical treaty. These include the articles that define the geographic scope of the treaty as well as key terms used in the document. Other articles define how the treaty will enter into force and how long it will remain open for signature. Articles may also call on parties to take "all appropriate measures" to address the problem, cooperate, and/or carry out certain provisions contained in the treaty.⁶⁴ Typically a treaty will include the rules of the regime regarding standards of behavior, the rules and procedures for allocating the resource in question,

enforcement and compliance mechanisms, and arrangements for regime adjustments based on new knowledge regarding the resource. Generally arrangements for periodic meetings or conferences are also established. In addition, a secretariat, who is responsible for calling and supervising meetings, transmitting information, and ensuring coordination with other international organizations, is also provided for by the treaty. The treaty as a form of international agreement is the most binding.

In addition to treaties, other types of instruments may also be employed in regime development. These include conventions, framework conventions, protocols, and nonbinding codes of conduct. Conventions contain general agreements about basic principles or procedures. They may contain binding obligations or may be followed later by a more detailed legal instrument. Framework conventions are those that are negotiated in anticipation of later, more extensive text. Framework conventions establish a set of principles, goals, and formal mechanisms for cooperation on the issue. Protocols are preliminary memoranda that serve as the basis for a final convention or treaty. Typically they spell out specific obligations for the parties. Finally, nonbinding codes of conduct or guidelines (also referred to as "soft law") have been used in areas such as international pesticide and hazardous waste trade.⁶⁵ As noted above, these various legal structures may or may not necessarily lead to effective regimes. The next section provides a discussion of approaches to evaluating the effectiveness of regimes.

Evaluating the Effectiveness of International Environmental Regimes

Regime effectiveness can be considered from several perspectives. Commonly effectiveness is measured by the level of success of problem-solving efforts, that is, the extent to which the work of the organization attains its objectives. Some international problems may be solved more effectively than others because either the problem itself is simpler or because the problem-solving capacity of regimes differs. The problem-solving capacity of a regime may depend on the institutional setting, including the rules of the game, the distribution of power among the actors involved, and the skill and energy invested in designing and marketing cooperative solutions.⁶⁶

Regime effectiveness may also be measured by the level of compliance among regime members. In this case, effectiveness is a function of the ability of the regime to influence its members to conform to the principles and implement the directives of the regime and its ability to monitor compliance with those principles. Compliance refers to whether countries adhere to the provisions of the accord as well as to the implementation measures; implementation refers to the methods that states take to make international accords part of their domestic law.⁶⁷

Alternatively, effectiveness may be measured by the level of impact the regime has on the environmental resource in question. Under this approach to evaluating regime effectiveness, the emphasis is on determining whether the regime has, in fact, been successful in leading to environmental improvement. It is possible that a regime can be effective in generating compliance but lack the strength and force necessary to elicit the changes required to lead to progress in protecting the environment.⁶⁸

Several characteristic regime features can influence the effectiveness of a regime. These include the process by which the regime is created and maintained, the scope and strength of the regime, the level of compliance among regime members, and the process of institutional learning through which collective behavior is modified in response to new learning or understanding.⁶⁹ Other factors influencing the effectiveness of a regime include the distribution of power among the actors involved and the skill and energy invested in designing and promoting cooperative solutions. Several factors that can limit the potential success of regimes are discussed in the next section.

Impediments to Forming Effective International Environmental Regimes. There are several factors that can impede the formation of effective international environmental regimes. The first is the implication (as espoused in the Brundtland Report) that solutions can be reached within the context of the current pattern of economic development.⁷⁰ The developing countries of the south view the current global environmental problems as the result of the actions of the dominant industrialized northern countries, and consequently, they expect the North to accept the responsibility for environmental damage. The southern countries may perceive that there is little or nothing to gain by signing on to international environmental agreements.

Other problems may also limit the potential success of international environmental regimes. For instance, some international treaties establish representation and voting procedures that do not guarantee all countries and interests equitable treatment. Similarly, an imbalance of the influence of science and politics in negotiations may not lead to effective agreements. In addition, linkages between environmental issues and other policy issues that could improve the effectiveness of environmental agreements are generally not developed.⁷¹ These various impediments tend to lead to least-common-denominator results, rather than optimal treaty agreements.

A potentially significant impediment to the formation of effective international environmental agreements is the possibility that there are conflicting interests between the individual state's desires and the requirements necessary to create effective global regimes.⁷² Differing interests can lead to internal and external pressures on national negotiating committees and make it difficult for states to reach an agreement. In addition, scientific

and political considerations are often unbalanced, and countries may use technical or scientific information inappropriately to advance their short-term goals. Given the lack of scientific certainty regarding environmental resources, countries may lack sufficient scientific knowledge to make good decisions. Thus several potential pitfalls can diminish possibility of creating successful environmental regimes. However, there are several measures that can be used to help to achieve effective environmental regimes. These are discussed below.

IMPROVING THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL REGIMES

Several measures can help strengthen the effectiveness of international environmental regimes. These include convincing national leaders to support efforts to protect and improve the environment, strengthening the national agencies responsible for supervising the implementation of environmental regulations, supporting international and national nongovernmental environmental organizations, and building epistemic communities.⁷³ An evaluation of the record regarding compliance with international environmental agreements indicates that more emphasis should be placed on improving information and reporting systems and inducing compliance through negotiation and incentives, rather than through the threat of punishment.⁷⁴

As an alternative to the traditional approach to creating international agreements, a multistep process has been proposed for improving the success of international agreements. This alternative approach is based on work done as part of the Salzburg Initiative, sessions that bring together international and national leaders to discuss and debate the merits of possible reforms to traditional approaches to the creation of global environmental treaties. Recommendations developed by the institute include providing prenegotiation assistance to individual countries to develop informed perspectives, expanding the roles for nongovernmental interests, and encouraging the media to play a more educative role.⁷⁵

APPLICABILITY OF REGIME THEORY TO ENVIRONMENTAL PROBLEMS

As we noted earlier in this chapter, human activities depend on the natural gifts of our planet. If our activities are to be sustained in the future, we must ensure that the natural systems on which our human systems depend are protected and preserved. The carrying capacity of our environment is limited; it cannot support unlimited amounts of human activity. Therefore, we need to discover ways to engage in needed human activities while still maintaining the environment on which we depend for our livelihoods.

Although most individual nations have environmental laws and regulations to deal with various environmental problems, in many cases the boundaries of the resources may cross national boundaries, making international management necessary for successful management of the environmental resource. Many international environmental regimes have attempted to protect and maintain various sectors of our environment. As we noted above, these have included such diverse areas as deep seabed minerals, marine pollution, stratospheric ozone, and geostationary orbits. Some of these have been more successful than others; many times political and economic decisions take priority over environmental concerns. If we are to maintain and protect our natural resources and environment for the future, then we must discover how to develop more effective international environmental regimes. We cannot simply continue as we have been; we must become more successful in managing our environment.

The European Union as a Regime

The European Union is a regime as defined above. It is a group of nations that have voluntarily come together to achieve specific goals by developing sets of principles, rules, and decision-making procedures. The EU has achieved considerable success in meeting many of its goals; thus it is an appropriate case for analysis of factors that contribute to successful regimes.

We have chosen to examine the European Union as a regime because by understanding the environmental challenges faced by the EU and the approaches taken to successfully meet those challenges, we will better understand the structures and incentives that will allow other international environmental regimes to be successful. As we discussed above, this is particularly important when examining international environmental regimes. While the EU did not begin as an environmental regime, it has altered its policies to make environmental considerations a part of all policy-making decisions.

An examination of the European Union will aid us in understanding the requirements for developing and maintaining successful international environmental regimes. Our understanding of the significant factors that result in successful regime policies and the effectiveness of those policies is vital if we are to be able to protect and maintain our environmental resources for the future.

As we will see in chapter 6, the EU still struggles to implement and enforce environmental regulations. However, as we will also see, there has been great success in many environmental areas. The EU has been able to integrate environmental concerns into the overall policy-making structure, focusing on the need to protect and preserve natural resources. The role of

the public, as we shall see, has been important in focusing the orientation of the government toward the environment.

CONCLUSION

The nature of many environmental resources results in a common pool problem. When the commons is on an international scale, regimes have often been created as devices to handle the problem of the common pool resource use that nations cannot manage individually. This chapter has reviewed theoretical approaches to regimes and factors affecting the effectiveness of regimes. As this chapter suggests, the formula for creating successful regimes is still under review. Many factors influence the success of a regime, including the actors involved, the stakes of the game, and the particular environmental problem at issue. In chapter 2 we will examine the European Union as a regime from an institutional perspective. We will review the history of the EU, along with the various treaties that have led to the current EU. A review of the policy-making structure, focusing on environmental policy-making, will also be provided to illustrate the nature of the institutional setting of the EU.