

ENVIRONMENTAL LAW AND ETHICS

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LO 5: ENVIRONMENTAL LAW – PRINCIPLES AND INTERNATIONAL ENVIRONMENTAL LAW

1. The need for political and legal regulation

Central Goal

It should be understood how environmental issues can be regulated by law and politics:

- why political–legal regulation is needed
- the principles of political–legal measures and
- the instruments that regulate environmental behaviour.

1.1 Why we need political-legal regulation

Objectives: Important is to

- understand what defines environmental politics and law and what are their goals and responsibilities,
- describe the different areas and issues for which environmental law is responsible,
- discuss generally the contribution of environmental law to the task of regulation of environmental questions by the state.

Peaceful co-existence in modern societies requires political negotiation between conflicting interests and therefore needs a reliable and consistent legal order. The law is at the same time both a result and a condition of legitimate political action. Applied law is always influenced by the dominant moral values of a society. Most of all, the law provides the foundation for the decision or arbitration of cases, in which parties with different claims run up against each other. This applies to conflicting or hazardous claims for the use of natural resources as well as to the treatment of non-human beings. Therefore, in the 20th century a separate environmental legislation was established. This legislation takes account of the growing extent of societal intrusion into nature. As the environment becomes a scarce good, which many societal protagonists compete to utilise, while the natural habitats of plants and animals (and therefore themselves) are in danger of extinction because of the expansion of civilisation, politics and law are increasingly asked to protect nature from exhaustive cultivation, blight and destruction. The mandate for a more efficient policy on the natural world and ecology is owed not least to growing public ecological awareness and an increasing appreciation of animals and plants for their own sake. Natural and environmental protection becomes a public duty, which is to be considered equally as important as the promotion of the economy or the attainment of social

justice. As a result, environmental law increasingly rates highly within the legal system. And with the establishment of environmental law, environmental ethics is valorised as well, as environment ethical values are incorporated in the formulation of environmental law. From now on, the enforcement of environmental ethical demands in modern society is bound to the embodiment and effectiveness of environmental law.

Meanwhile, there are countless regulations that are either directly of an environmental nature or at least co-determined by environmental legal considerations and provisions, for example,

- The determination of critical values for emissions or fishing stocks
- The allocation of water licenses
- The release of areas for development or agriculture
- Permission for constructing dams, bridges or airports or for altering river courses (canalisation), installing waste disposal sites, establishing industries or energy generation

Almost all human activities that encroach in some way on the environment or the ecosystem have the potential to raise environmental legal questions and require environmental legal regulations.

In general, political–legal regulation or environmental law is an important tool for the protection of the environment in accordance with economics and social life. It is a complex and interlocking body of statutes, common law, treaties, conventions, regulations and policies that, very broadly, operate to regulate the interaction of humanity and the rest of the biophysical or natural environment. The purpose of all legal regulation on the protection of environment is the reduction or minimisation of the impacts of human activity, both on the natural environment for its own sake and on humanity itself.

The most important areas environmental law has to deal with are, among others: air quality, water quality, global climate change, agriculture, biodiversity, species protection, pesticides and hazardous chemicals, waste management, remediation of contaminated land and sustainable development.

Environmental law is influenced by principles of environmentalism such as scientific ecology, responsibility for nature and the concept of sustainability. Insofar as environment protection is a public and state goal, it is based on several environmental political principles.

The legal norms and rules can be divided into general and special environmental regulations. General regulations for environmental protection are not assigned to a special field, but are applicable across all sectors. Special regulations for environmental protection are differentiated according to the object of protection or the kind of measure. For the object of protection the legal orientation can be:

- Media-related for the protection of different environmental media (such as soil, water and air)
- Causal for the protection of the environment against hazardous emissions or substances
- Vital for the direct protection of animals and plants

In regard to the different kinds of measure, the environmental law can be related to:

- Facilities (serving a function, e.g. for air pollution control, radiation protection or energy saving)
- Substances (protection against hazardous chemicals, waste avoidance or waste disposal)
- Areas (for water pollution control, rural conservation or soil conservation)

Because no environmental code exists in which all relevant subjects of environmental protection are covered in an integrated manner, different branches of law are affected by environmental legal regulations: public law, criminal law (or environmental criminal law), under which environmentally harmful behaviour becomes a punishable offence; and civil law, under which entitlement for compensation for ecological damage is regulated etc.

Environmental law holds numerous instruments through which the goals of environmental protection can be achieved and environmental political specifications can be efficiently implemented. The array of instruments includes especially:

- Instruments for environmental planning (primarily for the protection of resources or for the prevention of ecological risks)
- Instruments for the direct control of behaviour (prohibitions, orders and certain obligations for protagonists with relevance to the environment)
- Instruments for the indirect control of behaviour (influence on the motivation of protagonists with relevance to the environment)

These instruments will be discussed later. First, however, we will turn to the principles that are (or should be) the basis for any ecological legislation; these are the organising principles to which international environmental law, the environmental law of the European Union and in general of all nations always refer.

1.2 Principles for political and legal measures

Objectives

Important is to

- distinguish and explain the principles guiding environmental law both in a national and an international frame,

- understand the meaning of ‘environmental sustainability’ and ‘sustainable development’ in the context of nature protection

Serious and substantial environmental law has to be guided by some high-ranking principles. For many international and national regulations in the field of environmental law within the European Union (e.g. in Germany), four basic principles are the basis for all processes of environmental law-making:

- the precautionary principle
- the polluter-pays principle
- the principle of sustainable development (concerning the integration of environmental protection and economic development) and
- the cooperation principle.

Other principles are often mentioned, which complete the four main principles or define them in a particular way. Some examples are:

- Environmental procedural rights
- Common but differentiated responsibilities
- International and intergenerational equity
- Common concern of humankind
- Common heritage

In this chapter we will focus on the four most important principles.

1.2.1 Precautionary Principle

In its origin, the precautionary principle is rather a political than a philosophical principle and was first introduced as ‘Vorsorgeprinzip’ (principle of precaution) in the German-speaking area. It was incorporated into several national legal texts and international treaties or declarations. A good definition was given by Per Sandin et al. (2002: 288): ‘The basic message of the precautionary principle is that on some occasions, measures against a possible hazard should be taken even if the available evidence does not suffice to treat the existence of that hazard as a scientific fact.’ It can therefore be stated that the precautionary principle is based on hazard detection and scientific uncertainty. As a consequence, the burden of proof (that an action might cause severe harm to the public or the environment) falls on those who plead for measures to prevent such a harm (see also Raffensperger and Tickner 1999). Whenever one can anticipate plausible harm for society or the environment, the precautionary principle should be applied. But often it is not clear whether a planned action will cause harm to the public or the environment or not, because the possible impact of human actions on the environment or

human health often depends on the dynamics of complex systems, so the real consequences of actions may be unpredictable. Therefore, further scientific research is required – but also caution if a current action intervenes in complex (human or natural) systems.

Nowadays the precautionary principle is incorporated into many European and international contracts and treaties. In its 1976 Report on the Environment, for example, the German Federal Government describes the precautionary principle as follows:

Environmental policy is not limited to averting imminent danger and remedying damage that has already occurred. Precautionary environmental policy furthermore demands that the natural environment be protected and treated with care. The precautionary principle is embodied in a number of environmental provisions, and also involves resource conservation in addition to risk precaution. (German Federal Government 1976)

The precautionary principle is especially important in legal regulations and decisions concerning potential risks to public health, such as the marketing of genetically modified foods, the use of growth hormones in cattle raising, or measures to prevent ‘mad cow’ disease.

Nevertheless, in real cases the policy-makers often have to struggle with a lack of valid scientific information or with irreducible conflicts between the interests of different stakeholders. Sometimes it is very difficult to estimate or assess the potential harm and to find an acceptable political compromise. But anyway, rigorous application of the precautionary principle should be avoided when there is insufficient knowledge of whether there is a real potential risk from an innovative product or an activity or not. In this case the principle could be taken immoderately as an absolute ban on all actions (see Van den Belt 2003), which could stall all technological innovation and progress.

1.2.2 Polluter-Pays Principle (versus community-pays principle)

‘The polluter-pays principle states that the one causing environmental impact is principally held responsible—materially and financially—for protecting the environment and is required to prevent, correct, or financially compensate such impact’ (Knopp 2008: 7). But a problem arises in cases of inherited pollution where the responsible parties often cannot be held liable and—if no other party can be held responsible—the general public must bear the cost. In such cases the polluter-pays principle would be replaced by the community-pays principle.

In environmental law, the polluter-pays principle is enacted to make the party responsible for producing pollution responsible for paying for the damage done to the natural environment. It is regarded as a general custom because of the strong support it has received in most Organisation for Economic Co-operation and Development (OECD) and European

Community (EC) countries. In international environmental law it is mentioned in Principle 16 of the Rio Declaration on Environment and Development (1992).

The polluter-pays principle is an important element of environmental policy and influences, for example, political measures for reducing greenhouse gas emissions. Often this principle will be applied as the so-called ‘extended polluter responsibility’ (EPR). This concept was probably first formulated by the Swedish government in 1975. For instance, EPR can help to shift the responsibility for dealing with waste from governments and taxpayers to the real producers of the waste. OECD defines EPR as: a concept where manufacturers and importers of products should bear a significant degree of responsibility for the environmental impacts of their products throughout the product life-cycle, including upstream impacts inherent in the selection of materials for the products, impacts from manufacturers’ production process itself, and downstream impacts from the use and disposal of the products. Producers accept their responsibility when designing their products to minimise life-cycle environmental impacts, and when accepting legal, physical or socio-economic responsibility for environmental impacts that cannot be eliminated by design.

1.2.3 The Principle of Sustainability (Sustainable Development)

Another important principle is the principle of sustainable development, which may be viewed as an instance of applying the precautionary principle to resources. This principle is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations. For the first time, the term ‘sustainable development’ was used by the Brundtland Commission (1987), which has given the most famous definition of sustainable development as development that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’ (United Nations 1987).

The term ‘sustainable development’ seeks to combine the resources and processes of natural systems with the human needs and economic activities of social systems. Already in the 1970s the term ‘sustainability’ had been used for an economy ‘in equilibrium with basic ecological support systems’ (Stivers 1976). On the base of the idea of sustainability and according to the alarming theses of *The Limits to Growth* (Meadows et al. 1971) many ecologists tried to create the new concept of a ‘steady state economy’ (Daly 1973), especially with respect to environmental concerns. In this context, ‘sustainable development’ does not refer solely to environmental issues, but also takes into account social and economic considerations: the resolving of conflicts between different competing goals and stakeholders, and the harmonising of economic growth and social welfare with environmental quality. The concept of sustainable

development – both of nature and society – points out that the survival of mankind depends essentially on the survival of nature (or the natural environment), because economic and socio-cultural welfare is directly coupled with the the welfare of nature – resources, plants, animals, etc. Ultimately, the exploitation and degradation of nature can result in the inability to maintain human life and even in the extinction of mankind. The theory of sustainable development is therefore based on the assumption that societies have to manage three forms of non-substitutable capital: economic, social and natural capital (for further information see Dyllick and Hockerts 2002; Daly 1973, 1991).

It may be that we can find ways to replace some natural resources, but it is unlikely that we will ever be able to replace the services provided by the eco-system: for example, to protect us against dangerous cosmic radiation with an intact ozone layer, or to supply us with sufficient oxygen as the tropical forests or the algae of the oceans do. The multi-functionality of many natural resources and also biodiversity are irreplaceable. Moreover, the deterioration of natural resources and the loss of natural services (e.g. the absorption of nutrients by a lake) are often irreversible processes – like the loss of ethnic and cultural diversity (e.g. indigenous languages). Therefore, only a sustainable development can secure both: the protection of a functional intact environment and the survival and welfare of human beings.

1.2.4 Cooperation Principle

‘The cooperation principle underscores that environmental protection is the responsibility of all of society and not just of the state: accordingly, all parts of society and the state are called on to cooperate’ (Knopp 2008: 49) The cooperation principle is the weakest of the four environmental principles, and it can hardly be considered as satisfying the requirements demanded of a guiding principle of law.

1.2.5 Other Principles

Apart from the four basic principles, there are a number of others guiding national and international environmental law, such as the ‘grandfathering principle’ or the ‘principle that action may not result in a significant deterioration of environmental conditions’ (Knopp 2008: 49). Last but not least, we should also mention the principle of transboundary environmental protection: this principle mirrors the insight that environmental problems do not stop at national borders. For instance, this principle underpins much of the Water Framework Directive of the European Union where it covers the transboundary management of water resources in natural river basins.

National as well as international environmental laws are often based on the above called principles, especially the transboundary principle. This is important, because many

environmental problems are border-crossing problems, for example, climate change, sea water and air pollution.

1.3 Regulation of Environmental Behaviour

Objectives

On completing this lesson, it is important to be able to

- estimate the importance of appropriate ‘environmental behaviour’ in terms of environmental law,
- discuss the differences between direct and indirect regulation of environmental behaviour.
- Point out the applicability of the different instruments of environmental politics and law to regulate environmental behaviour

1.3.1 Instruments to Enforce Environmental Policy (planning)

Environmental policy has developed in the industrialised countries primarily as a reaction to the highly intensive growth of the environment industry at the beginning of the 1970s into special government departments. At first policy confined itself mainly to the activity of the state. Over the years, however, more and more protagonists with any interests in the environment field (so-called ‘stakeholders’) are being called to account on environmental matters. In particular, the responsibility of the producer of (potential) environmental problems is becoming increasingly significant. There is also a need to exert eco-political goals and strategies in other departments, for example, in policy for energy, transport and industry, agriculture, and building and construction. ‘Hard’ eco-political instruments (such as laws and regulations) exist side by side with the ‘soft’ methods of behavioural control (such as education of engineers concerning environmental awareness), for example, in the case of projects that involve many private stakeholders or the public.

Besides environmental law, environmental planning forms are a central set of tools to the extent that environmental policy tries to operate not only as a regulatory but also as a formative instrument. Environmental planning can be regarded as the development of sustainable environmental strategies to facilitate the achievement of regional or sectoral environment protection goals within a certain time-frame, for example, the reduction of CO₂ emissions by 25% within the next ten years. In the 1980s the implementation of national environmental plans in Denmark, Netherlands and Finland played a pioneering role in this. We will, therefore, first expand on the possibilities of environmental planning.

To enforce environmental policy principles and objectives two instruments (according to Knopp 2008) are implemented in the legal framework of many states within the EU:

- Different types of environmental planning
- Different measures for regulating environmental behaviour

Environmental planning provides an important means of precautionary protection. Planning takes place as a multi-stage process, involving registering the current situation and forecasting future developments; moreover, it has to take into account possible conflicts of interests.

Plans can take the form of laws, statutory regulations, statutes, administrative regulations or administrative acts, each of which has different legal consequences. In addition, environmental planning may involve comprehensive planning or sectoral planning. Two forms of environmental planning are dominant:

- Comprehensive planning. The task of comprehensive planning is ‘to determine, while exercising foresight, land use for residential, economic and leisure purposes for a certain area, irrespective of any specific project and not limited to any specific sector’ (Knopp 2008: 51);
- Sectoral planning. By contrast, sectoral planning serves to establish environmental protection plans for specific sectors, chiefly landscape, clean air, noise abatement, water conservation and waste management, all of which require additional enforcement measures.

Another important instrument for enforcing environmental policy demands is environmental impact assessment (EIA). The primary objective of this instrument is ‘to inform the administration comprehensively and in good time about the environmental impacts of environmentally significant projects’ (Knopp 2008: 52). EIA is used to identify, describe and assess all of the direct and indirect impacts of a planned project on the environment, including ecological interactions, in good time, thus allowing precautionary measures to be taken across all media and sectors, and involving the public.

1.3.2 Instruments to Regulate Environmental Behaviour

Environmental behaviour is perhaps the most important target for environmental policy and education. There are various instruments for regulating environmental behaviour, which can be distinguished as direct or indirect forms of regulation:

Direct Regulation of Behaviour

Direct regulation of behaviour pertains to legal measures designed to immediately affect environmental behaviour. The traditional instrument of this type is environmental regulatory law, ‘which originates from police and regulatory law and generally punishes non-compliance by imposing sanctions’ (Knopp 2008: 53). Accordingly, actions with adverse environmental impact are subject to administrative control, which is characterised by legal requirements of notification, registration, licensing, authorisation, approval and other procedures of granting

permission to engage in such activity. In addition, direct regulation is also exercised by means of expressly prohibiting or requiring certain behaviour by law.

- Absolute legal bans (e.g. in Germany under the Federal Nature Protection Act, 2002, §§ 23 [2], 42 [1] and [2]), directly forbid certain behaviour with adverse impact on the environment. However, legislators only rarely employ measures of this type.
- By contrast permission procedures are the key instrument in current environmental regulatory law in many European states. Projects subject to permission are strictly prohibited without permission. ‘Erecting or operating an installation of environmental significance, using environmental media, or producing and distributing certain products may all be subject to permission’ (Knopp 2008: 54). Thus a permit is a constitutive administrative act in that it grants the applicant the right of lawfully engaging in an otherwise prohibited activity.
- Environmental law includes a number of so-called environmental obligations, of which basic obligations are of special significance. They impose certain obligations either on everyone or on a certain group of people. Normally, these basic obligations involve preventive and precautionary measures, most notably the conservation of resources (e.g. water or soil). Apart from those basic obligations, there are ‘numerous collateral obligations that may benefit the environment, such as promotion and performance obligations, monitoring and protection obligations, obligations to cooperate and continuously disclose information, organisational obligations and obligations to tolerate certain actions’. (Knopp 2008: 56)

Indirect Regulation of Behaviour

Indirect regulation of behaviour does not rely on norms mandating behaviour, but aims to influence motivation: incentives are provided for environmentally friendly behaviour while leaving discretion to the addressee. The means of indirect regulation behaviour notably include informational instruments, economic instruments, such as levies certificates, and subsidies.

- *Information, appeals and warnings*

According to the German Environmental Information Act (1994), providing free access to environmental information is viewed as a means of sharpening the awareness of citizens and public authorities of the need for effectively protecting the environment. These means of raising environmental awareness range from political and moral appeals to warnings, recommendations and other forms of information, such as labels and product and usage information.

- *Levies*

The most important means to indirectly regulate behaviour are environmental levies. ‘They place a price tag on the use of the environment and leave it to market participants to decide if and how they will react based on their individual cost–benefit analyses’ (Knopp 2008: 58). In practice, the inability to precisely affect behaviour via environmental levies can pose a problem. If they are set too low, polluters will opt for paying the levy instead of altering behaviour harmful to the environment. If levies are set too high, they may impede economic competitiveness. For instance, the following environmentally relevant charges are being levied in Germany in 2012:

- Waste water charges
- Countervailing charges under nature conservation law and forest protection charges in various German States
- Water abstraction fees in some German States (‘water penny’)
- Waste transportation charges (consumer law)

Environmental levies may be imposed as taxes, fees and contributions for benefits incurred, and special levies.

- *Granting benefits to users of environmentally friendly products*

‘Benefits for use’ refers to provisions that relax or lift general limitations imposed on the use of environmentally harmful products in the case of products that comply with standards that, although not required by law, are considered desirable, thus rendering such a product more environmentally friendly than others of the same kind. ‘Although this instrument does not involve financial incentives in the medium and long term, changes in consumer behaviour may be expected that may lead to crowding environmentally more harmful products out of the market’ (Knopp 2008: 60)

- *Subsidies*

Providing financial assistance is a form of indirect behaviour regulation. Subsidies are monetary or non-monetary benefits granted by the state, without any product or service being provided in return. Subsidies are generally viewed with scepticism, since they are considered to be prone to abuse and to place the cost burden of environmental protection on the general public. In the European Union there has been a tendency to cut back on environmental protection subsidies

- *Environmental certificates*

The idea of environmental certificates is based on a market-compatible form of quantity control by the state. Certificate-based schemes do not take prices as their starting point but define an

admissible level for a certain future use of the environment in quantitative terms, leaving the formation of process up to the market. This instrument has been employed for climate protection under the Kyoto Protocol. The allocated emission allowances grant the holder the right to pollute the environment only to a certain extent. Should the holder pollute the environment to a lesser degree than permitted, the holder may sell the unused pollution allowances to another polluter. 'Enterprises may thus elect to either reduce emissions from their installations or to acquire additional emission allowances from other enterprises that have been able to reduce emissions at lower cost' (Knopp 2008: 61). Future experience will show whether this instrument will indeed prove successful in reducing greenhouse gas emissions. Economic instruments are gaining increasing significance as a complement to environmental regulatory law. There is no single answer to the question as to what is actually the 'proper' choice of instruments in order to achieve an adequate balance between various environmental user interests, the interests of affected neighbours, the interests of the general public and the protection of the environment. Legislators and administrations are thus ultimately compelled to rely on trial and error to reach an appropriate decision.

2. International Environmental Law

2.1 Basic Principles of International Environmental Law

Protecting the environment is becoming increasingly important for modern international law and takes more and more space in it. The protection of natural resources has become a central task of international law. The reason for this is that the threat and destruction of our natural resources are unstoppable without increased cooperation. Thus, the pollution of the atmosphere and oceans, global warming, ozone depletion, the rapid loss of biodiversity and threats by very risky activities have become the subject of international treaties. The subjects they content, such as the protection of the climate and biodiversity, are partially considered as a "common concern of humankind". It is about the effective protection of indivisible environmental goods, which can no longer be regulated alone within state sovereignty zones. The same applies to cross-border environmental impacts that require international cooperation. The economic globalization can lead to increasing environmental impacts, for example through the growing international transport of goods.

From these different potential hazards to the environment also different tasks on duties arise for the international environmental Law. Required for this is a framework for international cooperation. This cooperation frame international rules in international treaties create, that primarily serve to protect the environment. They form the core of international environmental

law. However, there are important provisions of such international regulation fields also in other matters, such as international economic law or human rights. So, there is no clearly distinguishable jurisdiction "international environmental law", even if the terms of environmental protection norms of international law are based on common principles and conflicts.

The historical roots of international environmental law date back very far. But a first upturn marks the Earth Summit in Stockholm in 1972 with its Stockholm Declaration. In its principle 21 states are obliged - in spite of their fundamental sovereignty over their own natural resources - to ensure that activities within their jurisdiction or under their control do not cause environmental damage in other states or in sovereignty free spaces. In addition, the "United Nations Environment Program" (UNEP) was set up at the conference in Stockholm. This program plays an important role in the initiation and negotiations of many regional and global environmental agreements.

Special upturn has this development taken by the United Nations Conference on Environment and Development in Rio in 1992. Here the principle of common but differentiated responsibilities of developed and developing countries for the protection of the environment has been enshrined in all documents. The international reference is given as the cross-border nature of serious environmental pollution is obvious. Furthermore, environmental problems cannot be solved on a regular basis by one country alone but often require cooperation between damaged and polluter state. A significant contribution to solving environmental problems should have been the creation of a UN-Commission on Sustainable Development to coordinate the international sustainability concerns. In part, a link between the protection of human rights and that of the environment is seen, thus in the jurisprudence of the European Court of Human Rights, the African Charter of Humans and Peoples' (Art. 24) and the Additional Protocol to the American Convention on Human Rights (Art. 11). The areas of human rights and environmental protection are featuring the new "public" international law.

However, the targeted global partnership has been hitherto little viable. This can be seen on the "World Summit on Sustainable Development" from 2002 in Johannesburg as well as on the Rio + 20 Summit 2012 in Brazil. Whether the Treaty of Paris of 2015 brings a change for the better, remains to be seen despite the general agreement by all parties. Its results and agreements cannot be sanctioned, so depend on the good will and the political, economic and social situations of each country. They can be set in their national implementation, among other things by the parliaments or repealed by the courts.

2.2 The Customary International Law

Summarizing we can state that international environmental law is the body of international law that concerns the protection of the global environment. Originally associated with the principle that says that states must not permit the use of their territory in such a way as to injure the territory of other states, international environmental law has since been expanded by a plethora of legally-binding international agreements. These encompass a wide variety of areas that have potential issues, from terrestrial, marine and atmospheric pollution through to wildlife and biodiversity protection.

The key constitutional moments in the development of international environmental law are:

- The 1972 United Nations Convention on the Human Environment (UNCHE), held in Stockholm, Sweden
- Publication of the 1987 Brundtland Report, Our Common Future, which coined the phrase ‘sustainable development’
- The 1992 United Nations Conference on Environment and Development (UNCED), known as the Earth Summit, held in Rio de Janeiro, Brazil

As a core principle of the environmental law of nations it was determined at the Stockholm conference in 1972 that states are entitled to exploit their own resources, but that it is also their responsibility to ensure that actions originating in their territory are not causing any damage to the environment of other states. This policy is known today as ‘customary international law’. This law includes all norms and rules that countries follow as a matter of custom, and they are so prevalent that they bind all states in the world. When a principle becomes customary law is not always clear cut and states not wishing to be bound put forward many counter arguments.

Examples of customary international law relevant to the environment include:

- The duty to warn other states promptly about emergencies of an environmental nature and environmental damage to which another state or states may be exposed
- Principle 21 of the Stockholm Declaration (‘good neighbourliness’).

However, an obligation of the state to take certain actions (for example, a prohibition of any transboundary damages to the environment) cannot be deduced from customary international law; at most there is an obligation to adhere to due diligence, which obtains generally between states (see Simonis 2003: 227). Nevertheless, we can proceed on the assumption that international environmental law will gain ever-increasing importance. This will ultimately depend on how fully the principles pronounced in the 1972 Stockholm declaration will be implemented in cross-national stipulations. A special role in this process could also be played by the concept of ‘the common concern of humankind’, which has been confined so far to

climate protection and biodiversity. And the United Nations Framework Convention on Climate Change (UNFCCC), the international treaty produced at the Earth Summit in 1992 could eventually mean that countries will take their obligations against global environmental problems more seriously—particularly with regard to North–South relations.

2.2.1 Principles of International Environmental Law

Ban of Injury

States are allowed to use their territory under its sovereignty. However, this principle is now limited to the extent as its own territory cannot be used so that other states would significantly be harmed. A landmark decision has already been set in 1938 to the international environmental law - the famous Trail Smelter Case. It was about the sulfur dioxide emissions from a nearby melt in Canada. These emissions have led to crop failure on the territory of the United States. The court of arbitration found that no state has the right according to the rules of international law or the United States to use its territory so that the territory of another state is affected by emissions; either by damage to the property or persons. However, there must be a serious case and the damage must be fully demonstrated.

This prohibition of damage to other States has meanwhile undergone extensive development. Also areas should be covered, that do not belong to any state (so-called State Blanks). This applies, for example, the Antarctic, the high seas (Art. 192 ff., 194 UNCLOS) and the space. This is based on principle 21 of the Stockholm Declaration of the United Nations Conference on Human Development in 1972. It states that it is "the sovereign right of States to exploit their resources pursuant to their own environmental policies and ensure their accountability that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond national jurisdiction".

Responsibility of States and International Environmental Law

Although a fundamental clarification is given in terms of environmental damage by States, still many questions and many issues remain unresolved. This is the case for the standard of liability as the validity, the scope and the reach of an international precautionary principle and on the evidence of the damage to alternate end demands. Strict liability cases are rare, especially when that was contractually agreed. One example is the making of objects in space (Art. II Convention on International Liability for Damages Caused by Space Objects). Apart from the problematic of enforcement in the international arena without military means, the existing liability law is applicable only within narrow limits. Where environmental damage is caused by the interaction of many, both private and state-owned enterprises, it is difficult to attribute this individual tortfeasors and use them for liability (Example: ozone hole).

Polluter Pays Principle in International Law

A major economic and legal principle is that in principle the polluter should bear the cost of pollution (Principle 16 of the Stockholm Declaration). This principle characterizes mainly the civil liability for dangerous activities. It is a general principle of international environmental law Preamble to the Convention on transboundary effects of industrial accidents (Preamble to the Convention on transboundary effects of industrial accidents).

The Precautionary Principle in International Environmental Law

"To protect the environment, States use the precautionary principle widely and according to their abilities. Is there a risk of serious and irreversible damage the lack of scientific certainty shall not be a ground for postponement of cost-effective measures to prevent environmental degradation?" In this form, the precautionary principle is formulated at international level as Principle 15 of the Rio Declaration. This principle can be found in a plethora of conventions and declarations, as in the preambles to the Vienna Convention for the Protection of the Ozone Layer (1985) and its Montreal Protocol (1987); as well in the Convention on the Protection and Use of Transboundary Watercourses and Lakes of 1992 (Art. 2, para. 5). In the frame of UNFCCC, the Member States (3 Art. 3 para.) Commit to meet precautionary measures to forestall the reasons of climate change, to prevent it or minimize and mitigate its adverse effects. And the International Sea Tribunal has acknowledged the precautionary principle in its decision of 27 8.1999 (customary international legal principle).

Principle of Cooperation in International Law

The principle of cooperation is already found in earlier agreements concerning the sharing of international watercourses; it is now a feature of the international environmental law. After Principle 24 of the Stockholm Declaration the international environmental protection is to take place in a spirit of co-operation. After Principle 7 of the Rio Declaration on Environment and Development of 1992 " States cooperate in a spirit of global partnership to maintain the health and integrity of the Earth's ecosystem and to protect and restore it". After Principle 13 " States cooperate faster and more decided to develop further international law regarding the liability for and compensation of adverse effects of environmental damage, caused by activities within their jurisdiction or its control to areas beyond their jurisdiction. "The Convention on Biological Diversity contains a corresponding duty of cooperation with regard to state-free spaces (Art. 5).

A special form of cooperation obligation is the obligation of States to inform each other about impending or existing environmental damage. Many agreements contain such a requirement (s. example Art 198 UNCLOS; Art 13 Basel Convention on the Control of Transboundary

Movements of Hazardous Wastes and their Disposal.); moreover, the obligation to provide information can already be considered as part of customary international law today. The requirement to make an environmental impact assessment which is accompanied by information obligations increasingly finds entrance into international treaties (s. for example, the Convention on Environmental Impact Assessment in a Transboundary Context of 1991). The framework of an international obligation of cooperation in environmental law also contains the specific responsibility of developed countries for environmental degradation in Principle 7 of the Stockholm Declaration and esp. in the UNFCCC. Modern international law even demands the consideration of the interests of future generations, which is far beyond the traditional conception of international law as between state law.

Hazardous Activities in International Law

Partially an own regime for particularly dangerous activities is required. In particular, a strict liability should apply as the Convention on International Liability for Damage Caused by Space Objects arranges (Article II.), not the usual in international environmental law applicable – objectified – standard for debts. What exactly falls under these dangerous activities is not easy to determine. Decisive is the extent of the potential damage, may be entering also be unlikely. There is agreement in any case with regard to including the nuclear energy. Not only the adhesion but also the duty of cooperation of the states holds even more for polluting activities. Numerous bilateral and multilateral agreements, such as the resolution adopted in consequence of the Chernobyl nuclear accident, the Convention on Early Notification of a Nuclear Accident 1986, set out detailed provisions regarding content and addressees of the immediate delivery of information (see Art. 2, 5, 6).

In the same year the Convention on assistance in cases of a nuclear accident or a radiation emergency was signed concerning general enhanced cooperation obligations for nuclear accidents. It contains detailed provisions on the aid of the International Atomic Energy Agency to be granted and on the support of other countries and international organizations. Also the growing problem of disposal of toxic and hazardous waste and the practice, this to discharge in the Third World, led to the conclusion of some international agreements.

The Organization of African Unity accepted the Bamako Convention on the ban on imports and the control of transboundary movement and treatment of hazardous waste in Africa in 1991. Then, (4 Art. para. 1) to import such waste in Africa is illegal and a criminal act. Under the Basel Convention on the control of Transboundary Movements of Hazardous Wastes and their Disposal by 1989, States may not carry wastes to countries that prohibit their import. If there is no prohibition, the export is permitted only after written consent of the importing

country and generally not south of 60 south latitude. Both conventions also contain detailed provisions on intensive cooperation, including extensive information requirements.

2.3 Protection of Different Environmental Media

2.3.1 International Watercourses and Lakes

The already-mentioned Convention on the Protection and Use of International Watercourses and Lakes reflects the modern development of international environmental law, by declaring the principles of precaution, the liability of the responsible and intergenerational justice as leading principles (Art. 2, para. 5), by providing environmental impact assessment (Art. 3) and containing broad cooperation obligation (Art. 9 ff.). Similarly, Convention on the Law of Non-Navigational Uses of International Watercourses, adopted in 1997, is incorporating the principles of balanced ("equitable"), wise use division, which presupposes a cooperation among the participating States and more detailed provisions on cooperation obligations, as well as the already in the Trail Smelter –case expressed principle of avoiding serious damage. In contrast to the Convention on the protection and use of international watercourses and lakes the precautionary principle is expressed only with regard to the introduction of foreign species. States shall take all necessary measures to ensure the to prevent introduction of foreign or new species into an international watercourse that “may” have adverse consequences for the ecosystem (Art. 22).

Both conventions, however, refer to the principle of sustainability, which basically means a use within the limits of recoverability.

2.3.2 Pollution of the Seas

The UNCLOS (United Nations Convention on the Law of the Sea), adopted in 1982, confirms the injury ban and provides (Art. 194 para. UNCLOS) the principles of cooperation and priority of the developing states (Art. 192 ff.). Furthermore, it contains general provisions, which support the prevention of pollution of the marine environment from land and from the sea used to protect the living marine resources (Art. 204 ff.). More specific provisions can be found in the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972; it has been recasted entirely, and the International Convention for the Prevention of Pollution from Ships (MARPOL), 1973, as amended by the Protocol of 1978. The latter is mainly due to the flag state principle. That means, breachings of the provisions of MARPOL are punishable by the law of the country whose flag the ship use or under whose authority it drives, regardless of where the offense is committed (Art. 3 and 4 MARPOL). Under the London Dumping Convention, it is essential, in which state a vessel is registered or

whose flag it uses, in which state it invites dumping substances or finally which jurisdiction it is subject (Art. VII London Agreement). Specifically, in terms of oil spills to call is also the still not entered into force International Convention on Preparedness, Response and Cooperation in the Field of Oil Pollution, November 30, 1990 (ILM, vol. 30, 1991, 733) and the International Convention on Civil Liability for Oil Pollution Damage of 1992.

2.3.3 Protection of the Atmosphere and Outer Space

While the Convention on Long-Range Transboundary Air Pollution from 1979 contains only moderate obligations of states, the Montreal Protocol on Substances that Deplete the Ozone Layer, obliges the states in a gradual reduction of CFCs and a setting of the use of halons. An Implementation Committee, erected on its basis, monitors compliance with these obligations. The Framework Convention on Climate concerns are not covered by the Montreal Protocol greenhouse gas and is aimed at stabilizing greenhouse gas concentrations in the atmosphere at a level from, at which a dangerous anthropogenic interference with the climate system (Art. 2). The developed countries and others referred to in Annex I countries, such as Eastern and Central European countries, then reduce their emissions, so total and taking into account a certain backlog of developing countries the level of 1990 can be achieved again

The Framework Convention on Climate concerns greenhouse gas not covered by the Montreal Protocol and is aimed at stabilizing greenhouse gas concentrations in the atmosphere at a level at which a dangerous anthropogenic interference with the climate system (Art. 2) will be prevented. The developed countries and others referred to in Annex I countries, such as Eastern and Central European countries, then reduce their emissions, so totally and taking into account a certain backlog of developing countries the level of 1990 can be achieved again.

The UNFCCC was ratified in the shortest possible time by almost all countries of the world; the reservations are generally prohibited (Art. 24). This corresponds to the character of the Convention as part of the new public law which regards common interests and concerns of humanity ("common concern"). The Kyoto Protocol to the UNFCCC from 1997 substantiates the reduction commitments of industrialized countries by indicating the pro government permitted emissions in the form of a percentage of the emissions of 1990. The European Community and its Member States have already ratified the protocol. The United States have signed the protocol, but refuse the ratification because of feared effects on the domestic economy.

Overall, the international environmental law is a very dynamic matter and, as indicated, in this area several characterizing principles have developed.

2.4 Effects of International Environmental Law in the European and National Law

2.4.1 Effects in the European Union

The European Union has legal personality (Art. 47 EUV) and thus also international legal capacity. The Union can also enter into contractual relations with other States or international organizations under Art. 216 I TFEU or Art. TEU. On this basis, the EU has ratified more than 40 international environmental agreements by the year 2015. These international treaties are an integral part of the legal order of the EU and apply to the institutions of the EU and for its Member States as general principles of law of the EU.

Moreover, the Lisbon Treaty has not only created a new institutional framework for the foreign policy of the EU, but therefore also for its international environmental policy. In futures the environmental competences of the Union will be decisive, according to Art. 191 ff. TFEU in conjunction with Art. 3 II and Art. 216 ff. Therefore, the EU is entitled (Art. 3 II and 2 I TFEU) for external representation of the Union if an international agreement is necessary to enable it to exercise its internal competence, or insofar as its conclusion may affect common rules or alter their scope. This gives the EU a far-reaching exclusive legislative competence in international environmental policy for the EU Member States. On the basis of Art. 216 I in conjunction with Art. 218 II TFEU, the Council can decide in the framework of its political discretion. whether the EU starts international negotiations. When the Council opens negotiations, he authorizes the opening of negotiations, then sets the guidelines for negotiations, authorizes the signing and ultimately closes the Convention (Art. 218, II, IV, V and VI TFEU).

2.4.2 European Law

European law is supranational law which, unlike international law directly affect the rights and obligations of the citizen. For the institutions of the Community, the following forms of action are available:

Regulations

Directives

Decisions

Recommendations

Opinions

2.4.3 European Legal System

Regulations are general legal principles that apply directly in all Member States, without requiring a national legislative process (Regulation (EC) no. 1272/2008 → CLP Regulation).

Directives are binding legal norms, however, the Member States have the choice of form / means (-RL (EEC) No. 313/90 → Umweltinformationsgesetz UIG) with regard to the objectives set for the Member States.

Decisions are individual acts, which are only binding the respective Member State (comparable with a German administrative act).

In contrast, recommendations and opinions are not binding and only represent the EU's views on various points.

2.4.4 Development of European Environmental Law

- Treaty of Paris 18.04.1951: establishing the European Coal and Steel Community
- ECSC (effective from 07/23/1952)
- Treaty of Rome from 02/25/1957: Treaty establishing the EEC and the European Atomic Energy Community EURATOM (effective from 01.01.1958); ECSC, EEC and Euratom form the European Community
- Paris Summit from 12.20.1972: start of environmental activities by the final declaration of the summit
- Die EG-Kommission stellt Umweltschutzprogramme (Umweltaktionsprogramme) auf, ohne dass es dafür eine Rechtsgrundlage in den Gemeinschaftsverträgen gibt: Art. 235 EWG-Vertrag:
“If action by the Community should prove necessary to attain, in the course of the operation of the common market, one of the objectives of the Community and this Treaty has not provided the necessary powers, the Council shall, acting unanimously on a proposal from the Commission and after consulting the European Parliament, take the appropriate measures.”
- Single European Act from 28.02.1986 EEA, the environmental policy is taken up as a policy in the Treaty and the Environmental Protection explicitly constituted under Community law (in force since 01.07.1987)
- Maastricht Treaty of 07.02.1992, refining the now viable authorization for specific environmental activities of the Community (Art. 130r to t of the EEC Treaty, then Art. 174 to 176, in the consolidated version in March 2010 Art. 191 to 193).
- ”Treaty on European Union TEU Title XX Environment Article 191:
1. Union policy on the environment shall contribute to pursuit of the following objectives:
 - preserving, protecting and improving the quality of the environment,
 - protecting human health,

- prudent and rational utilisation of natural resources,
- promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.

2. Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.”

The Treaty on European Union TEU regulates in Title XX Environment Article 193 as essential aspect to the development of environmental protection in the EU:

“The protective measures adopted pursuant to Article 192 shall not prevent any Member State from maintaining or introducing more stringent protective measures. Such measures must be compatible with the Treaties. They shall be notified to the Commission.”

Mainly framing this however is so far the EU Commission.

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LO 6: NATIONAL ENVIRONMENTAL LAW: A CASE STUDY

1. National environmental law: a case study

1.1 Legal Steps of the Development of the German Environmental Law

1957 Water Act (currently 7th amendment of 2009)

1959 Atomic Energy Act

1968 Waste Oil Law

1968 Plant Protection Act

1971 Petrol Lead Act

1971 Aircraft Noise Act

1971 Animal Welfare Act

1972 Waste Management Act

1972 DDT-Law

1.2 The German Legal System

As an example of a national environmental legislation Germany may be used. This involves not the representation of the environmental legislation, but rather modern design possibilities will be characterized that go far beyond a simple legislative and draw among others economic means of structuring.

First, the basic rule is the protection of the environment as a national objective in the Constitutional Law (Article 20a Environmental Care Principle). It declares that "the state protects also in its responsibility toward future generations, the natural resources in the context of the constitutional order through legislation and in accordance with law and justice by the executive and the judiciary".

The legislative competence in general and, therefore also for environmental legislation rests with the federal government and the states (Länder). Contrary to the principle in Art. 30 (Competence Presumption of States) and Art. 70 para. 1 GG, according to which the countries are generally entitled to legislate, most laws are now adopted not by the State but by the federal government. With regard to the legislative competence of the respective legislative body is distinguished:

- The exclusive federal legislative competence (Art. 71, 73 GG), which relates to foreign affairs, defense and currency and monetary system. Of the
- concurrent legislation (Art. 72, 74, 74a GG), on the basis, among other

- Waste Management
- Chemical safety
- Air pollution and noise abatement and
- Nuclear safety and radiation protection (enforcement in federal order) are regulated.

1.3 Instruments of Environmental Protection

As instruments of environmental law available to the legislature available are to be named:

Legal instruments of environmental law (Ordnungsrecht)

- (1) Registration and notification obligations, disclosure requirements, security requirements, legal prohibitions with permission and approval by (preventive / repressive bans) Orders of the administration on the basis of the general process, security and police law;
- (2) Planning instruments of environmental law Fachplanung (landscaping, clean air plans, water management plans, waste management plans), spatial overall planning (spatial plans, land use planning); EIA project-related determination of the impact on the environment (assessment of environmental risk), Rules of procedure for obtaining information;
- (3) Legal tax instruments of environmental law Environmental taxes, Incentive taxes, countervailing charges (compensation of interventions); Informal instruments in environmental law, recommendations, warnings, appeals, official environmental consulting.

1.4 Environmental Policy and Regulation

Even the instruments of environmental policy have become increasingly diverse. Initially sovereign law-making with mandatory standards, approval procedures, do's and don'ts (command -and-control) stood in the foreground, so the over-regulation threatened to overwhelm the state and also the willingness of those affected. Instruments that allow greater customization scope and focus on the personal responsibility of the polluter, therefore play an increasing role. This applies to emissions trading in climate, which requires mandatory caps on emissions, but allows a flexible adaptation. The now often imitated German instrument of feed-in tariffs (Einspeisevergütung) for electricity from renewable energy sources is another example. The nevertheless continuing importance of mandatory government regulation is evident from the fact that new instruments of this type - but those with high flexibility - spread internationally. A particularly impressive example is the Japanese top-runner approach:

energy-intensive products such as refrigerators, computers and air conditioners have to reach within a certain time the consumption of the most energy-efficient product in its line of business, otherwise threaten public warnings and eventually fines. For a whole range of products, the standards have been tightened even dynamically.

Modern environmental policy in Germany is controlled through a mix of instruments or strategic, verifiable targets (such as in climate change) that are tracked with a flexible instrument use. The "hard" instruments (such as laws, regulations) retain their importance - not least as a guarantee that "softer" instruments actually achieve effects.

An ambitious environmental policy that intervenes in interests is dependent on broadening of its social base. Environmental governance therefore takes place more on collaborative relationships, often in a broad network of state and non - state actors. In addition to the environmental groups, there is now a network of environmentally oriented business organizations, such as BAUM (German Working Group for Environmental Management), Future or the World Business Council for Sustainable Development. In the local area, additional actors are involved in the target formation or the implementation of measures - 2427 German municipalities have taken, for example, a decision on the Local Agenda 21.

1.5. Ways towards a Modern Climate and Energy Policy

The protection of the environment and climate is one of the global challenges of the 21st Century and enjoys in German politics, in journalism and civil society a high priority. Germany is recognized internationally as a pioneer in climate protection and a pioneer in developing renewable energies. Germany as the first industrial nation in 2011 decided to phase out nuclear energy. For years, Germany pursues a path which brings together climate and environmental protection within the meaning of sustainable management. The key to this is to increase the energy and resource efficiency, the development of renewable energies and raw materials. This promotes the development of new energy technologies on both the supply side, in power stations and renewable energy, as well as on the demand side, where energy is consumed.

The Nature Conservation ("protection of the natural foundations of life") is enshrined as a national objective in Article 20a of the Basic Law since 1994. An intact nature, clean air and clean water are prerequisites for a high quality of life and environmental quality in Germany. For air and water pollution environmental indicators are pointing in a positive direction, because many emissions have been significantly reduced in recent years.

1.5.1 Land Pollution (Nature and Soil Conservation)

Nature conservation and landscape preservation play an important part both in climate protection and in possible adjustment to climate change. This non-technical side of climate protection and adjustment has tended to be neglected hitherto in climate policy worldwide. Still the major role of soils in storing carbon (C) and nitrogen (N) has attracted too little attention in the discussion to date.

The wide range of different soils involved, the ways these are subjected to pressure and the sectors that cause these ecological burdens, as well as the long-term nature of the changes make it difficult to develop a transparent soil regulation regime. The strategic direction set out by soil protection concepts should then aim to

- raise the awareness on the part of users and the general public of the multifunctional tasks performed by soils;
- expand the function- and location-specific ceilings and guiding values for soil loads as well as the verifiable quality objectives, and integrate these into existing legal provisions (soil conservation, water protection, nature conservation laws);
- take soil protection into more account when identifying limits for emissions and immissions (Federal Immission Control Law - BImSchG), and extend existing concepts for the identification of limits (such as the "critical load", which takes into account the relations between nutrient content and content of harmful substances) to include additional parameters;
- compare soil protection regulations with the targets set for other environmental media, and thus build a consistent system of regulations.

1.5.2 Noise Pollution

In the field of noise protection important progress has been made in recent years in legal and practical terms. Firstly, after protracted and arduous negotiations it has proved possible to radically amend the Law on Protection against Aircraft Noise, which did not prove particularly helpful since it first hit the statute books in 1971. Secondly, progress has been made on the enforcement of the noise reduction plan introduced on the basis of the EU Directive on Environmental Noise.

1.6 Environmental Pollution Monitoring and Control

1.6.1 Pollution Prevention: Methods and Tools

In Germany, routine measurements are made in the environmental areas of air, noise and water. These measurements are to ensure that the quality of such media is checked as well as to

evaluate any measures necessary in order to insure safety or improve quality. The legal basis for measurements intended to monitor environmental air quality is the “Federal Immission Control Act” (Bundes-Immissionsgesetz, BImSchG). It contains the requirements for the installation and operation of facilities which might potentially do damage to the environment. Legal and administrative regulations make these requirements more concrete.

In order to ensure that these regulations have been abided by, the BImSchG gives the governmental authorities the possibility to order either discontinuous emission monitoring at regular intervals or if mass flows are large by means of continuous measurements. Emission monitoring is part of the catalogue of measures provided for in the Federal Immission Control Act. §7 BImSchG empowers the German Federal Government to take legal measures to require that the operation and self-monitoring of facilities which require governmental approval fulfil specific standards.

A Europe-wide requirement for emission monitoring exists at present:

- for large-scale incineration plants 2001/80/EG [16]
- for the incineration of household waste 2000/76/EG [17]
- for certain activities and facilities using organic solvents (VOC-Guidelines) 1999/13/EG

European guidelines are to be made a valid part of national law within set time limits. In part, national legislation already includes the EC requirements. Where this is not the case, laws will be revised or new laws initiated (e. g. the revised version of the 17th BImSchV of 14 August 2003).

Concerning land pollution, a central monitoring instrument developed in recent years is the nationwide network of long-term soil monitoring sites designated by the Länder and covering a representative cross-section of landscape types, soils, land use profiles and pollution loads. At these sites, soil quality is documented in a comprehensive programme of soil chemistry, soil physics and soil biology studies. Climate data, substance inputs and outputs, and changes in site biocoenosis are measured continuously to assess substance flows. These data are used both to record current soil quality and to predict future changes.

Differing measurement methods used to investigate the same object of measurement do not always produce comparable results. To be more precise: The object of measurement is only finally defined by the choice of the measurement method. Therefore it is imperative to standardize measurement and analysis methods in order to make measurement results comparable when differing methods have been used at different sites. Before their publication, the [DIN and VDI] regulations were first subjected to the most thorough testing. These testing

procedures included determining the statistical characteristic value and the potential sites where such procedures would be used as well as any limitations they might have. Standardized measurement methods are therefore an efficient tool for determining emissions.

1.6.2 Legal Aspects of Environmental Pollution Control Practices

On the basis of the reform of federalism, in 2006 the German government put the project of compiling a comprehensive *Environmental Code* originally launched three decades ago back on the agenda. The reorganisation of legislative competencies makes it basically possible to achieve an enforceable nationwide "all-round codification" of all important matters covered by environmental law. Now the Federal Government had retained the competence to enact framework legislation in important environmental matters: legislation is subject to so-called „concurrent legislation“.

The reform of federalism intends to improve and strengthen the implementation of European law in Germany. Whether the reorganization of competencies between the Federal Government and the States will ultimately lead to better and quicker implementation of European law remains to be seen. In any case, the reform has paved the way for establishing a unified

Environmental Code (UGB), comprising the following sections:

- General objectives and principles of environmental law,
- cross-sectorial environmental subject matters,
- project-related environmental law (integrated project licensing, intervention measures and monitoring, environmental protection in enterprises, environmental management systems),
- water management,
- nature conservation.

Irrespective of the cross-sector orientated Environmental Code a lot of sector legal regulations for the different environmental matters in Germany is in force. In the following, we will point out as an example the existing regulations for controlling soil pollution respective soil quality. A major problem in assessing soil quality is that the available data are gathered at different administrative levels. These data have to be made compatible and processed, fed into soil information systems and interpreted. Soil protection is a complex, interdisciplinary field, and national soil protection law needs to be better dovetailed with other relevant areas of law so that visible progress can be made by integrating soil protection aspects into other sector legislation.

The precedential areas of sector legislation include:

- Certain provisions of the Closed Substance Cycle and Waste Management Act (Kreislaufwirtschafts und Abfallgesetz).
- Provisions on the carriage of hazardous goods
- Fertilizer and plant protection law
- The Genetic Engineering Act (Gentechnikgesetz)
- The Federal Forest Act (Bundeswaldgesetz) and Länder forest law
- Land consolidation law
- Construction, modification, maintenance and operation of transport routes and provisions governing traffic and transport
- Construction planning law and building regulations
- Federal mining law
- Federal pollution law

The Federal Soil Protection and Contaminated Sites Ordinance (Bundes-Bodenschutz- und Altlastverordnung or BBodSchV) is the main statutory instrument for enforcement of soil protection law in Germany. The Federal Soil Protection and Contaminated Sites Ordinance make use of several powers conferred under the Federal Soil Protection Act: The Federal Soil Protection and Contaminated Sites Ordinance (Bundes-Bodenschutz- und Altlastverordnung or BBodSchV) is the main statutory instrument for enforcement of soil protection law in Germany. The Federal Soil Protection and Contaminated Sites Ordinance make use of several powers conferred under the Federal Soil Protection Act:

- The Ordinance covers the investigation and evaluation of suspect sites, contaminated sites and soil degradation, and lays down requirements for sampling, analysis and quality assurance.
- It lays down requirements for hazard prevention by means of decontamination, containment, protection and restriction measures, and supplementary requirements on remediation investigations and remediation plans for certain sites.
- It contains requirements for the prevention of soil degradation.
- It contains requirements for the prevention of soil degradation.
- Finally, it specifies trigger values, action values, precautionary values and permissible additional pollution loads.

A standstill or even weakening of existing framework legislation should be prevented at all circumstances. Rather, the core preconditions for effective nature conservation must be guaranteed by law. These include in particular

- Regulation of interventions including changes in land use that are relevant for greenhouse gas emissions, with consistent preference given to compensation in real terms rather than monetary compensation
- Landscape planning by retaining compulsory planning procedures at all levels of political decision-making
- Ensuring the development and further extension of the system of protected areas
- Improving the interfaces between nature conservation, soil protection and water law by making it compulsory to develop multifunctional measures and to coordinate the use of instruments in sector legislation
- Further developing the regulation of good practices to reduce the environmental damage caused by agriculture, which is to a great extent relevant for climate protection
- Monitoring environmental status by establishing an effective database to provide information on the status of the ecological balance and biodiversity, and the effectiveness with which they operate.

1.6.3 International Agreements

Helping to shape the framework for global environmental protection and resource conservation is an important part of German development policy. German experts work actively with players from other countries on the elaboration of international agreements. For instance, they made key contributions to the drafting of the Statement of Forest Principles, the Kyoto Protocol, the Framework Convention on Climate Change, the Convention on Biological Diversity and many other international agreements. As a part of its contribution to fostering renewable energies, Germany hosted the international Renewables 2004 conference in Bonn, at which an International Action Programme was adopted.

All of these agreements have a common purpose: to protect the environment and make sustainable use of natural resources. One aspect is that resource consumption must be curbed worldwide, especially in the industrialised countries. Yet this must not deprive poorer countries of the basis for their further development. This is why Germany cooperates closely with the other industrialised nations as well as with the developing countries in efforts to implement environmental and resource conservation measures.

1.7 German Government's Policy

Waste management legislation is based on European law, German federal law, the federal states law and the statutes of the local authority waste management services. It is also based on the

precautionary principle, the polluter-pays principle and the principle of cooperation. The main pillar is the Closed Substance Cycle and Waste Management Act. This act has been further developed on the basis of the new EU Waste Framework Directive in order to strengthen waste prevention and recovery. Through this act, industry and commercial sector have been made responsible for the recovery of waste that means that they have to bear the costs. All waste from private households and waste for disposal from other generators have to be passed on to waste institutions subject to public law. For this service, fees have to be paid.

For waste destined for disposal, it has been stipulated that priority should be given to disposal within Germany (self-sufficient principle), whilst waste destined for recovery underlies the free movement of goods within the EU. The enforcement of waste legislation in Germany is mainly the task of the federal states. It is governed by the requirements for waste supervision contained in the Closed Substance Cycle and Waste Management Act and supported by requirements on waste recovery and disposal records, transport licenses and specialised wastemanagement companies. Modern waste policy in Germany has triggered the rapid evolution of recovery and disposal technologies – an important green market. Today, the waste industry employs more than 200.000 people and generates an annual turnover in excess of 40 billion. The infrastructure for all types of waste is in place.

Altogether, Germany's waste recovery rates are the highest in the world and show how the waste industry contributes to sustainable economic production and management in Germany by saving raw materials and primary energy. The share of waste which cannot be recovered has to be consigned to disposal without inflicting harm on the environment or on human health. Organic waste always has to undergo mechanic-biological or thermal treatment to render it inert, thus helping to reduce drainage water leakages and releases of landfill gas.

Since June 2005, it is no longer permitted to landfill organic waste without prior treatment. 69 waste incineration facilities with a capacity of 20 million tonnes were available in 2011 for the treatment of residual waste. Moreover, 4.6 million tonnes in incineration capacities are available in 30 refuse-derived fuel power plants. For the mechanic-biological treatment of waste, 48 facilities with a capacity of around 6 million tonnes were available in 2011 and they treated around 4 million tonnes of waste.

The new five-stage waste hierarchy lays down the following waste management ranking:

- prevention
- preparing for re-use
- recycling

- other (in particular energy-related) recovery and
- disposal

The option most beneficial from an environmental perspective takes precedence. However, next to ecological impacts, technical, economic, and social implications also have to be taken into consideration. With the new waste hierarchy, the German closed cycle waste management sector is being consistently geared towards waste prevention and recycling without putting established and ecologically highly efficient disposal procedures at risk.

Today, 63 per cent of household waste is already recycled. The Closed Cycle Management Act asks for a permanent recycling rate of more than 65 % of municipal waste.

1.8 Energy

1.8.1 Getting Out of Nuclear Energy

Both in private households as well as in transport and industry fossil fuels continue to be the backbone of the energy mix, accounting for about a third the mineral oil is the most important primary energy source, followed by natural gas, lignite, coal and nuclear energy. The Nuclear Energy (share of around nine per cent) will gradually be phased out and replaced by renewable energies according to the plans of the Federal Government. The funding policy set at the beginning of the 1990s in gear makes the use of renewable energy attractive and economical. That was the Renewable Energy Sources Act (EEG), a market incentive program to promote the use of renewable energy, is considered the driver of the upswing of climatefriendly energy sources and is adopted by many countries in its fundamentals.

The key policy document outlining the energy transition/Energiewende was published by the German government in September 2010, some six months before the Fukushima nuclear accident. Legislative support was passed in 2011. Important aspects include:

- greenhouse gas reductions: 80–95% reduction by 2050
- renewable energy targets: 60% share by 2050 (renewables broadly defined as hydro, solar and wind power)
- energy efficiency: electricity efficiency up by 50% by 2050
- an associated research and development drive

The policy has been embraced by the German federal government and has resulted in a huge expansion of renewables.

1.8.2. Conclusions and Implications for Other Countries in the Renewable Energies

Germany has been very successful in increasing the share of renewable electricity over the past decade, and this has largely been achieved by effective public policy. Within the public policy mix, the feed-in system was most significant. Demand from green power customers has also started to pick up, but impact on new capacity so far has been limited. In terms of lessons learned, we conclude by proposing a number of facilitating factors that helped the policy process in Germany, followed by recommendations for designing renewable energy policies and markets. In terms of facilitating factors, we would argue that the German model has been brought about by:

- A strong central government and a political culture that is open to government intervention
- A critical mass of interest groups in favour of renewable
- A critical mass of politicians with momentum and expertise about renewable energy
- The critical role of parliament: As the German example has shown, the electric utility industry and the federal Ministry of Economics have vested interests and can typically not be expected to be driving forces behind renewable energy legislation. Rather, members of parliament have taken the initiative, recently seconded by the federal ministry of the Environment.
- Forming inter-party coalitions: The German example has shown that support for renewable energy cuts across traditional political camps.
- Careful burden sharing: As any policy measure, the feed-in system has costs and benefits. Distributing costs widely among a disperse group of people was a success factor, while over time beneficiaries have been able to create a visible lobby.
- Market liberalisation creates a window of opportunity: When the German power market was deregulated in 1998, temporary price reductions left some room for compensation of renewable generators. The changing rules of the game also led to the dissolution of existing power camps, enabling new coalitions, and weakening the homogeneity of established associations. This was particularly relevant in the policy discourse around the EEG in 2000.
- Leaving room for customer demand to play its role. A piece of luck

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