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## "Sustainable Development" as legal term in European Community Law:

Making It Operable within the Habitats Directive and the Water Framework Directive

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#### 0 Introduction: Perspectives on Sustainable Development and European Community Law

The relation of sustainable development (SD) and European Community Law can essentially be observed from to two different perspectives. On the one hand it may be asked whether a particular law, for example by prescribing a technical standard for NO<sub>x</sub>-emissions of cars, promotes the idea of SD whose (political/moral) content is essentially defined outside the law (in this sense e.g. Grimeaud, 2001a and 2001b, but only from the title). On the other hand the legal meaning of "SD" has to be determined wherever it occurs in a legal provision. There are of course interrelations between these perspectives. Firstly, politicians and the general public tend to believe that, the more often "SD" is used within legal provisions, the more they will (automatically) promote the achievement of SD. Secondly, the legal meaning of "SD" cannot be determined without reference to the general discussion of SD, but has to take into account the specific contexts of the legal provisions where it occurs. This is especially relevant with respect to the method of purposive or teleological interpretation, which is also known in the context of European Law as "effet utile" (cf. e.g. Wasmeier, 2001, 162). It requires one to interpret a provision (insofar as literal, grammatical and systematic interpretations leave room for different meanings), in order to choose the one that best promotes the aim of the provision (or the intention of the legislator) by its probable effects in reality. This article follows the second perspective for developing a comprehensive and dogmatic understanding of the provisions of Community Law in which "SD" is found as a legal term.

The term "SD" occurs in several provisions of the European Treaties (primary law) and in European Habitats Directive (HD) and the Water Framework Directive (WFD) (as part of the secondary law). The interpretation of secondary law has to be adapted to primary law – with regard to SD, especially where secondary law contains clauses that require a weighing up of environmental and other interests, namely in the "exception clauses" of the said directives.

European Community Law does not provide a definition of SD. Any interpretation has to take account of the international and European origins and the subsequent scientific and political debate. It is not restricted to the state of debate at the time of the creation of particular

laws. Therefore, the origins of the concept and the following debate are recapitulated (1) before the relevant provisions of the European Treaties (2) and the provisions of the Habitats Directive and the Water Framework Directive (3) are studied. A summary concludes the paper (4).

#### 1. Sustainable Development: History, basic ideas and Concepts

The idea of sustainable development<sup>1</sup> was made popular by the Brundtland Report and the UNCED in Rio de Janeiro in 1992. The well-known and still well-used (cf. e.g. European Council 2001, 4 No. 19; European Commission 2001, 2; OECD, 1999, 18), definition (for a gallery of other definitions see Pearce et al. 1989, 173-185) of the Brundtland Report runs (WCED, 1987, 43):

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The concept of the WCED calls for the reconciliation of inter- and intragenerational justice<sup>2</sup> on a global level and the reconciliation of environmental protection and economic growth (Syngellakis, 1993) de facto resulting in a – as it was later called – common but differentiated responsibility on the part of industrialized and developing countries. The debate on SD has focused on the interpretation of inter- and intragenerational justice on a global level. The intergenerational aspect is widely accepted to be explicated and represented by the idea of maintaining something

<sup>&</sup>lt;sup>1</sup> For the development of the idea and its roots see e.g. Harborth, 1993, Kidd, 1992 and Timoshenko, 1995.

<sup>&</sup>lt;sup>2</sup> The WCED refers in its report more often to "equity" than to "justice", but does not provide any clear distinction between these notions. It is rather used synonymously and interchangeably with respect to intragenerational questions, where the WCED uses "social justice within and amongst nations" (1987, 49) and "social equity between generations,... extended to equity within each generation" (1987, 43). Brown-Weiss similarly treats (1989, Index) "justice" and "equity" as synonymous, without justifying her wording. In 1995 Brown Weiss uses "environmental equity" and "environmental justice" and the latter appears to be derived from the former (so Ginther 1995, 31). The relation remains unclear and is obviously not derived from an ethical theory or justified within in such a theory. Ali (2002, 19) observes that "justice" and "equity" are often used interchangeably, without developing a clear distinction himself. According to Sands (1995, 124 f.) 'equity' allows "to take into account of justice and fairness in the establishment, operation or application of a rule of international law", but he does not develop a coherent concept that elucidates the relation of equity, justice and fairness. "Equity" seems to be used in a special meaning in International Law (cf. Ginther, 1995), that is different from the Anglo American legal tradition, where equity is based on what is fair in a particular situation (Black's Law Dictionary 1979). The debate on intergenerational justice does not originate, however, from International Law, which I am not dealing with here. The OECD (1999, 19) also uses "equity". In conformity with the international philosophical debate (e.g. Rawls, 1970; Barry, 1999; Visser 't Hooft, 1999; Schwarze, 2003; Ott, 2004; Liederkerke, 1992, 173 f. uses "justice" and "equity" synonymously), I prefer to use "justice" (cf. also Declaris 2000). Finally, the CSD regards "equity" as one indicator for sustainable development in its set of indicators (CSD, 2001, 29).

like the productive capacity of societies to meet human needs (both physical and psychological) throughout the world. It includes the idea of preserving the natural and cultural heritage. Conserving the natural resource base is regarded as part of the moral obligation to future generations (WCED, 1987, 57). The notion 'ability' in the definition refers to the idea that the state of technology and social organization imposes limitations on the environment's ability to meet present and future needs (WCED, 1987, 43). The concept of physical sustainability is explicated in terms of the "carrying capacity of the resource base" (WCED, 1987, 45) and the maintenance of the "stock of ecological capital" (WCED, 1987, 52). It is concretized by the management rules for natural resources, distinguishing between renewable and non-renewable resources and the biosphere's capacity to absorb the by-products of human activities. The idea of maintaining (natural) capital still builds the - sometimes hidden - conceptual basis of many sustainability concepts like ecological footprint (Rees/Wackernagel, 1997), various systems of environmental indicator sets and political statements (BUND/Misereor, 1996; OECD, 1999, 20; UBA, 1997; European Community, 1993, 3; Ott/Döring, 2003; Coenen/Grunwald, 2003, 70) or assessment guidelines (e.g. DG Trade, 2004, 35). However, this idea can only be a rough guiding principle, as a growing population might call for efforts to increase the stock of natural capital while current degradation trends may require investment to prevent complete losses. Nevertheless, sustainability entails more than physical sustainability, even though this narrow concept "implies a concern for social equity between generations, a concern that must logically be extended to equity within each generation" (WCED, 1987, 43). In addition, development policies must pay attention to considerations such as changes in access to resources and in the distribution of costs and benefits (WCED, 1987, 43). As far as the successful application of the resource-management rules is concerned, the distribution of property rights and of political and economic power is of crucial importance. Inequalities in this area lead to situations where those affected are incapable of defending themselves against the degradation of their environment or are forced to overexploit it, especially in the developing countries (WCED, 1987, 46 ff.).

On a global level, the intragenerational aspect is often translated into the idea of convergence as regards the quality of living and consumption of goods with a focus on meeting the "essential needs of the world's poor, to which overriding priority should be given ..." (WCED, 1987, 43).

Both ideas – preserving the productive capacity and convergence in resource consumption – stem from the idea of equality as a fundamental principle of justice (cf. e.g. Dworkin, 1981, Ali 2002, 26 and Ott 2004, 99). Non-egalitarian positions lay claim to individually reliable access to the amount of resources necessary to meet basic needs (Krebs, 2001) and, in line with

the commonly accepted aim of improving the economic situation in the developing countries, a growing share of the resources consumed worldwide. As there are insurmountable difficulties in calculating the exact amount of resources and productive capacity needed to fulfil the future preferences and needs which have to be met in order to live a life in dignity (Unnerstall, 1999, 188 ff.), the ideas of preservation and convergence can therefore also be justified on pragmatic grounds on a non-egalitarian basis. In combination with the idea of safeguarding the long-term availability of natural resources, a significant reduction in overall consumption – mainly in the industrialized countries – is necessary so that the consumption of developing countries can grow in absolute terms.

To overcome the environmental and developmental crisis observed, the WCED mainly relies on economic growth in the developing countries and the industrialized countries. In the developing countries, growth serves to overcome absolute poverty, which is identified as the main driving force behind environmental destruction and the excessive use of natural resources (WCED, 1987, 49 ff.). Growth in the industrialized countries is expected to help stimulate the global economy, which is needed if developing countries are to increase their sales in order to pay their debts. However, the quality of economic growth in the industrialized countries has to be changed, i.e. its energy and material intensity has to be reduced and the widespread consumption patterns have to be changed. Above all, the consumption of energy per capita has to be reduced, as it pollutes the atmosphere beyond ecological limits and reduces limited reserves. A change in the quality of economic growth is also necessary in developing countries, since so far only the rich have profited from growth while the poor are forced to overexploit the few natural resources they possess. The distribution of income and wealth is an aspect of the quality of growth and therefore of SD.

These considerations of the WCED and the reflections on inter- and intragenerational justice clearly indicate that in order to achieve SD, the actual weights of environmental protection (ecological dimension), economic development (economic dimension) and social justice (social dimension) in the industrialized countries on the one hand and developing countries on the other hand are not/shall not/cannot be equally distributed. The close interaction of poverty and environmental degradation and the importance of subsistence production in the developing countries require lending 'equal weight' to these three dimensions in developing countries (cf. Chowdhury, 1995, 330). A similar constellation cannot be found in the industrialized countries. The three dimensions may be inseparable from a theoretical point of view and are therefore logically equal, but not from a political or moral point of view (cf. SRU, 2002, 68). These different obligations allow for speaking of common but differentiated responsibility, as it was later de-

clared in Art. 7 of the Rio-Declaration on Environment and Development (cf. to the history of concept in international environmental law Sands, 1995, 217 ff.; for a moral justification Ali, 2002) and specified in Art. 11 Rio-Declaration, in Art. 4 FCCC and in Art. 20 CBD (cf. Chowdhury, 1995, 334 ff.).

Crucial to the idea of preserving the productive capacity of fulfilling needs is the question of the possibility of substituting natural resources (cf. Pearce/Turner, 1990, Pearce 2000, 9 ff. and OECD, 1999, 21). The answer separates the "weak" from the "strong" sustainability (cf. e.g. Ali 2002, 9 ff. and Ott/Döring, 2003 and 2004, 97 ff.), in the course of which "marginal substitutability" and "total substitutability" have be distinguished (cf. Pearce, 2000, 10). Substitutability can exist on the level of the consumption of goods and the utility they produce, or on the level of the production agents. Substitutability is essentially an empirical question of the development of production technology. There can be different levels of substitutability: the theoretical, the technological, the economic and the commercial potential. The substitution of natural resources by human knowledge and technology has to cover all aspects of their value: both the use values and the non-use values (cf. e.g. Pearce/Turner, 1990) of the services provided by ecosystems (cf. Rothgang, 1999, 234): production of food and renewable resources; living space for humans and for flora and fauna; regulative functions (functions within the biogeochemical cycle) and information functions (e.g. archive of land-use history). Since "substitutability" is an empirical question, the precautionary principle can be applied, demanding not to take theoretically possible future achievements of technology for granted and not to extrapolate mindlessly past experiences into the future (Aage, 1984, 110).

Preserving productive capacity, therefore, goes far beyond maintaining production with respect to services or material goods. It also means, for example, preserving the natural heritage suitable for aesthetic experience (Krebs, 2001). The idea of maintaining the natural capital again proves to be only a rough guiding principle, as the (sustainable) use of one of the multiple functions of ecosystems might inevitably impair the ecosystem with regard to the other functions.

#### 2 'Sustainable Development' in EU Primary Law

The Community Law itself provides no definition of SD that would legally bind. The negotiations that lead to the emergence of SD in the Treaties are not documented. And the Presidential Conclusion of the European Council relevant meetings (European Council 1997a and 1997b) give no indication of a special meaning of SD intended by the authors of the Treaty provisions (cf. Dhondt, 2003, 53 ff). Of course, the different organs of the Community have formulated ideas concerning the political aim of SD, especially in the debate on the Sustainable Develop-

ment Strategy (SDS) of the EU (European Commission, 2001, European Council, 2001a, European Parliament, 2001). SD was firstly officially declared to be a political aim of the EC in the 5. Environmental Action Program, where the Council agreed that the achievement of sustainable development calls for significant changes in current patterns of development, production, consumption and behaviour (European Community, 1993, 3). From these sources some information can be drawn, but these documents are not binding for the interpretation of SD in the Treaties, as these institutions are not the authentic interpreters entitled to determine what is written in the Treaties (cf. Dhondt, 2003, 65). On the contrary, these political initiatives have rather to comply with the Treaties. It is argued that SD in EU Law follows the understanding in international law comprising essentially four principles (Dhondt, 2003, 59 following Sands, 1995): integration (of environmental considerations) into economic and other development planning, intergenerational equity (preserve natural resources for the benefit of future generations), sustainable (prudent, appropriate, rational, wise) use of natural resources and, finally, intragenerational equity or equitable use (the use by one state must take account of the needs of other states). Leaving aside the problem of the internal relations of these principles, Dhondt neglects the idea of common but differentiated responsibility that is not explicitly mentioned by the WCED, but by the UNCED and which can be situated in the principle of inter- and intragenerational justice (cf. Sands 1995, 205). This principle has a tradition of its own in international environmental law previous to the WCED and UNCED (cf. Sands, 1995, 217 and Segger et al., 2002, 51 ff.).

The key questions interpreting the provisions of the European treaties where "SD" occurs concern the relative importance of SD with regard to competing aims such as social and economic progress, and whether SD serves as an integrating principle for reconciling socioeconomic with environmental objectives (cf. Dhondt, 2003, 69).

#### 2.1. Preamble Recital, no. 8 of the Treaty on European Union (EU)

"DETERMINED to promote economic and social progress for their peoples, taking into account the principle of sustainable development and within the context of the accomplishment of the internal market and of reinforced cohesion and environmental protection, and to implement policies ensuring that advances in economic integration are accompanied by parallel progress in other fields,"

The interpretation of the EU influences the interpretation of the Treaty establishing the European Community (EC), as the Union forms the "roof" of the Community and various policies. The preamble, in particular of the EU, acts as a standard for the interpretation of both the EU and the EC (Frenz/Unnerstall, 1999, 154 with further references). In Preamble Recital, no. 8 EU, economic and social progress is declared to be one of the aims of the EU, which is to be

promoted as long as the framework objectives (the accomplishment of the market and reinforced cohesion and environmental protection) are not impaired. Therefore, these objectives are limiting factors on economic and social progress. In addition, SD has to be taken into account as economic and social progress is promoted. Regarding this restriction, two interpretations are possible. It could be read merely as a way of stressing physical sustainability in order to raise the level of environmental protection. This approach lacks any form of yardstick for balancing the environmental objective with the competing social and economic aims. Another concept just recognizes in SD (in the phrase 'taking into account SD') the missing yardstick for balancing these different aims. As shown above, the concept of common but differentiated responsibility commits the industrialized countries and, therefore, most of the member states of the EU to comply with the idea of preserving (its) natural capital and heritage. Although protection of the environment takes priority, there is yet room for the other aims. Social and economic progress and environmental protection seem to be opposed in the provision, such that they could be understood as contrary. But just as economic and social progress do not per se stand in contradiction to each other, social and economic progress do not per se conflict with environmental protection; environmental degradation may produce or simply are economic losses in the future and can affect members of a society very differently. Economic progress cannot be reduced to solely economic growth in terms of Gross Domestic Product (GDP); it can also consist of progress in intragenerational justice (environmental justice) or may consist in the establishment of a sustainable basis, e.g. in the conservation and enhancement of the resource base. Growth of the GDP can be pursued if and only if the overall (use or non-use) values of nature and environment are not impaired. Only the second reading as an integrative concept and a rule for weighing up competing aims does justice to the political and the scientific origins of the idea. 'Taking into account' means more than just 'taking note of'. It requires a visible influence on the decision to be taken. 'Taking into account' means that SD is not the only yardstick - however, other ones are not specified. Therefore the burden of reasoning lies on the side of deviation from SD.

#### 2.2 Art. 2 EU

"- to promote economic and social progress and a high level of employment and to achieve balanced and sustainable development, in particular through the creation of an area without internal frontiers, through the strengthening of economic and social cohesion and through the establishment of economic and monetary union, ultimately including a single currency in accordance with the provisions of this Treaty" Art. 2 EU is the main provision containing the tasks of the EU. The first recital names SD as an objective of the EU. Again, SD is just one objective alongside economic and social progress, etc. SD is not supposed to provide a framework for the achievement of the other aims.

The instruments mentioned (e.g. establishing a common market) are such that the relevance for SD is unclear, especially regarding the dominating aspect of physical sustainability. These measures may be assessed neutral or rather counter-productive with respect to the level of economic development already reached. But the instruments are only listed by way of example, as demonstrated by the use of 'in particular'. SD can be achieved by other more suitable means not explicitly mentioned. Hence, the objective SD is not restricted. The relationship with economic and social progress is therefore to be understood in the same way as in the Preamble. The other objectives in Art. 2 (common foreign and security policy, citizenship, etc.) can be regarded as neutral for SD.

#### 2.3. Art. 2 EC

The Community shall have as its task, by establishing a common market and an economic and monetary union and by implementing common policies or activities referred to in Articles 3 and 4, to promote throughout the Community a harmonious, balanced and sustainable development of economic activities, a high level of employment and of social protection, equality between men and women, sustainable and non-inflationary growth, a high degree of competitiveness and convergence of economic performance, a high level of protection and improvement of the quality of the environment, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among Member States.

Art. 2 EC is the central provision outlining the tasks of the European Community. In this provision, the objective of SD is again listed alongside other objectives. In addition, the term 'SD' refers to the "economic activities". Compared with the former version of the EC, only the adjective 'sustainable' was added: its aims already included both a "harmonious and balanced development of economic activities" and "sustainable economic growth respecting the environment." The reference to the other policies and measures according to Art. 3 and 4 as means to achieve the objectives appears less misplaced than in Art. 2 EU. The question is whether "harmonious, balanced and sustainable development of economic activities" serves as a concept that takes priority, providing a yardstick for weighing up, integrating the following objectives of Art. 2 EC and defining the framework restricting the range to which the other objectives may be pursued. According to the grammatical structure, the latter objectives are not meant to provide an explanation of the former. The interpretation of "harmonious and balanced" comprises elements that are already mentioned in Art. 2

EC (cf. e. g. Ukrow in Callies/Ruffert, 1999 Art. 2 EC Mn. 14 ff.): constant growth, the convergence of economic performance, the balanced development of all sectors of the economy, the preservation of competition and social security, etc. This coincidence indicates that it cannot be concluded that "harmonious and balanced" is the main objective and the following ones are merely explanations of an inferior status. "Sustainable development of economic activities" is not synonymous with SD, but the former is an integrative part of the latter and a necessary condition, for without SD of economic activities there can be no SD (cf. Winter, 2003). Like "economic progress" in the Preamble and Art. 2 EU "SD of economic activities" cannot be "measured" only in terms of "growth of GDP", but has to take into account the overall value of the environment and nature for the current and future generations.

There is no standard within Art. 2 EC for weighing up its different aims. Here the consideration is left to the discretion of governments or legislators. Nevertheless this does not exclude the possibility of finding a yardstick in other provisions of the EC.

#### 2.4. Art. 6 EC

"Environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities referred to in Article 3, in particular with a view to promoting sustainable development."

Like Art. 2 EC, this so-called integration clause comes under the heading of "principles". It emphasizes the importance of environmental protection for the EC and indicates its upgrading compared to its status in the former version (cf. Calster 2002, 477, Epiney, 2005, 109 and Stetter, 2001, 156; to the history of the integration clause see Dhondt, 2003, 16-24). The final aim of integration is the promotion of SD. "In particular" indicates that other goals may exist, although they are not explicitly named. The requirement of integration does not by itself mean that environmental protection takes priority within Community policies as there are other "horizontal clauses" (e.g. Art. 151(4) EC: cultural aspects, and Art. 157(3) EC: competitiveness of industry), where no priority would be attributed to the aspects to be integrated (cf. Schröder, 2003, § 9 Mn. 23). However, Dhondt (2003, 100-110) has worked out convincingly that Art. 6 is the "strongest" horizontal clause, as it is the only clause under the section "Principles", as it has a strong wording ("must ... integrate" instead of "take into account"), as it has a final aim (sustainable development) and relates to a "strong" policy area (environmental policy). This unique combination distinguishes Art. 6 EC from any other "horizontal clauses" in the Treaties, giving grounds for a rather strong interpretation.

On the procedural side, the integration clause demands that environmental effects be properly ascertained and evaluated in all the policies referred to in Art. 3 EC, which was often

omitted in the past (Syngellakis, 1993 and SRU, 2002, 154 ff.). This is the minimum content of Art. 6 EU, also called "weak interpretation" if it is regarded as the only content. Having no material requirement, it grants unlimited discretion to the authority concerned and allows for an outweighing of environmental concerns in each individual case (Dhondt, 2003 90 f.) like - for individual projects - in the Environmental Impact Assessment and the Strategic Environmental Assessment. This interpretation does not comply with abovementioned features of Art. 6 that distinguish it from the other horizontal clauses. Neither would any "integration" take place, nor would the aim of SD be reached (cf. Dhondt, 2003, 105 ff). Art. 6 must have a material side (Epiney, 2005, 112 and Wasmeier, 2001, 164). It is claimed that any measure that has a distinct, substantial negative impact on the environment is prohibited (Callies in Callies/Ruffert, 1999, Art. 6, Mn. 7, Beaucamp, 2002, 147, Wasmeiser, 2001, 160). In fact, any new highway or railway line has such an effect on the neighbouring area. What is crucial here is whether the integration clause requires a prevalence of environmental concerns other than the concerns pursued by the other policies. The "very strong" interpretation claims a priority of the environmental aims in any case (cf. Dhondt 2003, 86 ff. and Niestedt, 1999, 14). Dhondt (2003, 94 ff.) rejects this interpretation in favour of a "strong" interpretation that only claims that the environmental objectives, principles and criteria laid down in Art. 174 EC have equal weight to the policy specific aims of the policies of Art. 3 stated in the specific competencies of the EC Treaty (including economic aims). Dhondt derives this result from the Art. 2 EC, where all general objectives would have equal weight (2003, 88 ff.). Only according to the contribution of the policy-specific aims to the general objectives of Art. 2 EC differentiations of their weights within the consideration required by the integration clause shall be possible; the more a policy-specific objective contributes to the achievement of the principal objectives of Art. 2 the more weight it has compared to environmental objectives (Dhondt, 2003, 96). This concept leaves wide discretion to the authority in applying Art. 6 EC. The authority may give the avoidance of environmental damages priority, but it is not obliged to do so. Dhondt (2003, 99) gives only a few hints regarding the criteria for how to resolve the conflict and refers to the jurisdiction of the ECJ that has provided a solution for a similar situation of Art. 33 EC: "it is possible to temporarily give priority to one of the objectives involved, however, without making the attainment of the other objectives or protection of other interests impossible in the long run" (Dhondt, 2003, 95). In addition, the proportionality and the non-discrimination principle may/have to be applied (ibid.).

In my opinion this concept is not only not inferred from the aims of SD as explained above, but it is rather in contradiction with SD, especially with the idea of a common but differentiated responsibility. The aim of integrating environmental protection requirements is SD,

which entails the prevalence of environmental protection in industrialized countries, to which many – especially old – member states belong. SD serves as the standard for the extent of its integration and its weight in the face of the aims pursued by the policies that are subject to integration, gaining priority and prevalence over other aims (dissenting Winter, 2003, Wasmeier, 2001, 163 and Jans, 2000, 18, who denies that SD is only one additional aim, but doesn't want to give environmental protection requirements priority; similar Calster, 2002, 477). Similarly, the Court of First Instance stated that there is a principle wherein protection of the environment is to take precedence over economic interests (CFI, 2002, para. 186).

The scope of the integration clause is not only relevant to the policy level and the legislation of the European Union (Callies in Callies/Ruffert, 1999, Art. 6 Mn. 8 f.), but also to the implementation (Epiney, 2005, 109), application and finally the interpretation of secondary law (Jans, 2000, 22; Dhondt, 2003, 178 ff. and Wasmeier, 2001, 161), when the interpretation leaves or opens room for complementing by reference to general principles of the Treaties. This in accordance with general interpretative standards and especially required by the effet utile concept (Wasmeier, 2001, 162). Any policy, legal measure (especially secondary legislation) or project in a policy field of Art. 3 EC other than environmental policy (and of course any project in that field itself; dissenting Niestedt, 1999, 11), that has a significant negative impact on the stock of natural capital and violates the principles and rules of SD, i.e. the prevalence of environmental concerns, infringes thereby upon the integration clause (for the relevance of individual projects: Niestedt, 1999, 12). This prevalence is also valid for the policies that are pursued in the course of achieving the objectives set out in Art. 2 EC (dissenting Schröder, 2003 § 9, Mn. 29). Art. 6 EC, thereby providing the missing standard for weighing up competing tasks in Art. 2 EC, Art. 2 and the Preamble EU.

As shown above, SD in the industrialized countries calls for the reduction of resource consumption, the preservation of natural heritage/capital, and the giving of priority to environmental protection over economic and social interests. Insofar as most of the current members of the Community are industrialized countries, these objectives are legally binding for the integration of SD into primary law via Art. 6 EC.

The EU has taken different measures to comply with the integration clause. In the field of foreign trade policy the DG Trade was the first to launch a Sustainability Impact Assessment (SIA)<sup>3</sup> in 1997, but its limited scope of application does not allow drawing consequences for the interpretation of Community Law. In 1998 the European Council (1998) initiated – after some

<sup>&</sup>lt;sup>3</sup> The DG Trade (2003) defines SIA as "a process undertaken during trade negotiation which seek to identify economic, social and environmental impacts of the trade agreement."

other fruitless attempts (cf. Niestedt, 1999, 20 ff.) – the so-called Cardiff-Process (cf. European Commission, 2004 and 2004a), the attempt to systematically integrate environmental concerns into other policy fields. This has been tried for the fields of transport, agriculture and energy sectors, industry, internal market, development, fisheries, General Affairs and economic and financial affairs, all of which have adopted integration strategies. There have been no efforts to orientate relevant environmental policies (biodiversity conservation or water protection) itself more closely to the SD objective of Art. 6 EC. The outcomes, however, are regarded rather critically by the European Commission (2004), especially clearer priorities and a strengthening of political commitment are needed in its view (ibid, 37 f).

One of the results was the wide-ranging introduction of the Impact Assessment (IA) by the European Commission (2001) in order to gather systematically information on the economic, social and environmental consequences of their yearly adopted working agenda. The Commission has presented guidelines and a handbook for their impact assessment, but crucial questions remain unsolved. The Commission does not carry out an Impact Assessment for "measures deriving from its powers of controlling the correct implementation of Community Law" and not for executive decisions, implementing decisions a.o. (2002, 5; cf. 2004a). There is no methodology provided that can be used in an individual case at the level of interpreting existing secondary law. More important is that the methodology only sets the frame for gathering and presenting information, being only an aid to decision-making, not a substitute for political judgement (European Commission, 2002, 3 and 9). Consequently no indication, no yardstick is given how to weigh up expected effects in one area with adverse effects in other an area. This task is explicitly left to the political judgement and discretion, but as well as the "selection of instruments must be compatible with relevant Treaty provisions" the political judgement must be compatible with the Treaties, that is to say with Art. 6 EC and the principle of SD. Methodological core of the IA is the causal chain analysis:

"Giving a precise and objective description of the causal chains is vital, as too often analysis becomes flawed at this first stage by assuming rather than establishing links between causes and effects" (European Commission, 2002, 13).

This methodological restriction hampers the application of the precautionary principle, as causal effects that are not sufficiently proven are disregarded. On the other hand, this can also be of advantage especially since the economic effects of infrastructure projects on jobs and GDP-growth are often rather vague and, therefore, questionable.

And finally, also relevant with regard to Art. 6 EC, is the integration of environmental concerns in the Lisbon process which describes the political aim "to become the most competi-

tive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion" (European Council, 2000), by the adoption of the sustainable development strategy in 2001 (European Council), that adds "a third, environmental dimension to the Lisbon strategy". The Reporting of the Commission to the Council considers only a few environmental related indicators that mainly relate to energy consumption and CO<sub>2</sub>-emmissions, and only occasionally includes indicators referring to biodiversity conservation issues leaving out any indicators related to water protection issues (cf. European Commission 2002a, 2003, 2004b and Eurostat, 2004).

From the Cardiff process, the Impact Assessment and the Lisbon process with its SDS amendment, even if not scrutinized in detail here (more detailed SRU, 2002, 147-162 and Baldock, 2002), one general impression can be derived: Environmental concerns have at best equal weight to so-called economic and social concerns and as the "amendment" of the SDS to the Lisbon process indicates, presume less weight than these (similar Sheate, 2003, 341). This is, at least for most of the Member States, in contradiction with the component of intragenerational justice within the idea of sustainable development as initiated by the WCED. In the case of the IA and the SIA, the crucial question of weighing up different aims is excluded from the methodological guidelines and left to the political process. Finally, all these initiatives remain at the level of policy design or – at best – legislation. Therefore the do not provide any relevant information or guidelines for a case-by-case application of SD in provisions of the secondary law. They wouldn't be binding anyhow, as the Council and the Commission have no binding authority for interpreting the Community law. Their different methodical and political approaches only indicate that they would like to leave the question of weighing different goods/aims to the political contingencies. However, the conclusion may not be drawn, that the weighing within Art. 6 EC and SD lies completely at the discretion of the member states or their administrations without any judicial review. There might be some discretion in applying Art. 6 EC, but this is subject to judicial control.

Finally, it has been argued that the integration requirement of Art. 6 is not legally enforceable (cf. Dhondt, 2003, 119 f. and Beaucamp, 2002, 158). This idea is convincingly rejected by the already available case law (Jans, 2000, 19 ff. and Dhondt, 2003, 164 ff.) and the history of the integration clause (Callies in Callies/Ruffert, 1999, Art. 6 Mn. 21). Art. 6 EC can have a function for the choice of the proper legal basis for environmental measures, limits the role of the attributed powers doctrine in environmental policy and can serve other different purposes (cf. Jans, 2000, 20 and Callies in Callies/Ruffert 1999, Art. 6 EG). It may also be used to justify a restrictive interpretation of Community legislation to allow progressive national environmental

regulations to comply with it (Wasmeier 2001). Of course, it can also be used to control the material content of environmental policy, along the lines set out above, bearing in mind that the institutions have wide, but not unlimited discretionary powers as how to shape environmental policy.

#### 3. Sustainable Development in European secondary law

The secondary law has to be interpreted in accordance with the primary law. This rule is generally accepted by the European Court of Justice (ECJ) in its rulings and by the legal literature (cf. Jans, 2000, 22 and Wasmeier, 2001, 164). Yet, it was used to rule out one of a number of possible interpretations of the secondary law that would be in contradiction with provisions of primary law or in contradiction with general principles of Community Law (e.g. ECJ, 1993, § 24; 1994, § 9; 1991, § 17; 1986, § 21). Just recently the ECJ has invoked one of the principles of environmental legislation in Art. 174 EC, i.e. the precautionary principle, to interpret Art. 6(3) HD without directly mentioning that a different interpretation would be in contradiction with the Art. 174 EC:

"In the light, in particular, of the precautionary principle, which is one of the foundations of the high level of protection pursued by Community policy on the environment, in accordance with the first subparagraph of Article 174(2) EC, and by reference to which the Habitats Directive must be interpreted, such a risk exists if it cannot be excluded on the basis of objective information that the plan or project will have significant effects on the site concerned" (ECJ 2004, para. 44; similar ECJ, 2000a and 2000b; cf Jans, 2000, 22 and Dhondt, 2003, 179).

Similarly, the provisions of environmental and non-environmental law have to be read in reference to Art. 6 EC and the principle of SD, as it is accepted with regard to Art. 174 EC (cf. Dhondt, 2003, 179-180). Therefore it is also possible that an interpretation of the HD and the WFD may be in contradiction with Art. 6 EC by disregarding the aim of SD, and by the same token, other secondary laws may be in contradiction with other objectives and principles of the Treaties.

#### 3.1 Art. 6 Habitats Directive (92/43/EEC)

The main objective of the HD is to set up a coherent European ecological network of special areas of conservation entitled Natura 2000. It is composed of sites hosting the (certain) natural habitat types and habitats of the species listed in the HD. The network is supposed to enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored to a favourable conservation status in their natural range. Within this list there are two classes of protected areas and species, the normal and the priority natural habitat types and priority species. The establishment of the network takes place in three steps. Once it has been estab-

lished, but also at an earlier stage, any plan or project that is likely to have a significant effect on the protected areas, either individually or in combination with other plans or projects, is subject to an appropriate assessment of its implications for the site in view of its conservation objectives (cf. European Commission, 2000, 29 ff. and 2001a). If this assessment is negative, it may still be possible to carry out the plan or the project in accordance with Art. 6(4) HD (ECJ, 2004, § 44).

"4. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

This clause has to be interpreted in a restrictive way, because it is a deviation from the main principle of Art. 6(3) HD (cf. Nordberg, 2001 and European Commission, 2000, 42). 'Sustainable development' does not explicitly occur in it and even though it was adopted before SD was integrated in the Treaties, secondary law has to be read in light of their provisions. The essential weighing up of economic or social interests with ecological interests (in Art. 6(4) HD) must comply with the weighing in Art. 6 EC. Actually, Art. 6(4) deals with integration of environmental issues in other policies, namely those constituting an overriding public interest – here only seen from the environmental side. As far as priority habitats or habitats with priority species are concerned, the material justification requirements are formally no higher (cf. Wrase, 2004, 358), but the weight of the conservation interest within the consideration is higher (Ramsauer, 2000, 608). The opinion from the Commission is just a procedural requirement (dissenting Ramsauer, 2000, 608) and not substantively binding (European Commission, 2000, 49 and Gellermann, 2001, 107).

Regarding the question of whether the idea of SD is met, the required weighing of the different interests is of particular interest. Although it might be argued that full compensation obviates the need for weighing-up as there are no losses of natural capital remaining, weighing-up has to take place regardless of the possible compensation measure, for compensation and consideration are independent hurdles to be overcome (cf. European Commission, 2000, 46, and the structure of 2000 or 2000a). The requirement for compensation is admittedly part of the legal effect, but it is, however, widely regarded as a necessary condition – or at least as a rule – for the admissibility of the project (in this sense J. Schumacher/A. Schumacher in Fischer-Hüftle et al.,

2003, § 34 no. 72, Gassner in Gassner et al., 2003, § 34 no. 41 and Ramsauer, 2000, 605; dissenting Marzik/Willrich, 2004, § 34 Mn. 18). The Commission regards the compensation requirement as the 'last resort' to be used only when the other safeguards provided for by the directive are ineffectual (European Commission 2000, 44).

The question is, therefore, what "public interests" actually are. The clear-cut identification of the interest(s) is already necessary for examination of possible – functional and/or spatial – alternative solutions (similar Ramsauer, 2000, 606). Therefore, system alternatives have to be considered, too (dissenting Ramsauer, 2000, 606). This is also especially required by the integration requirement of Art. 6 EC. Given the case that the aim is to defuse a hot spot of accidents, changes in the traffic flow may be an alternative to building a new road. The aim of reducing the burden of noise pollution from a motorway can be reached by changing its surface, by establishment or improvement of sound screens, instead of building a by-pass. The clear definition of the aims is especially relevant for the spatial scope of alternatives. If the aim of a road construction project is to promote the establishment of industrial facilities and the creation of new jobs, the scope of alternatives is, and has to be, the whole of Europe, since the integrity of a site important to the Community is at stake. The search for alternative sites cannot be restricted to administrative borders of the responsible planning or authorization authority, since they are arbitrary as a result of historical and political developments and are "no longer logical from an economic geographic point of view" (Nordberg, 2001; similar Weihrich, 1999, 1703). The promotion of development of a successful competitive European aircraft industry has to consider sites over the whole of Europe for an establishment. Of course the aim can be defined more strictly, e.g. the promotion of the establishment of industrial facilities for the creation of jobs in a certain area. In this case, the burden to prove that this aim is of overriding public interest increases: Why should the economic development of a certain area should be more important than the preservation of a nature conservation site of Community importance?

Whether or not an alternative solution is available, is not subject to consideration. "In this phase, therefore, other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria" (European Commission, 2000, 42; cf. also 1996, 16). An alternative may only be unavailable if a marginal improvement of the conservation situation is facing very high differences of costs in terms of economic (including environmental) or financial costs or in terms of missing the objective of public interest, 4 i.e. if the alternative has disproportionate addi-

<sup>&</sup>lt;sup>4</sup> One can also argue that anything that would qualify as an alternative must be able to fulfil the objective of public interest to a similar extent. However, cuts in the degree of achieving the aims have to be generally accepted

tional costs (not total costs) (similar Nordberg, 2001, Hösch, 2004, 353 and BVerwG, 2000 and 2003). An alternative does not become unavailable, if it is facing legal difficulties, e.g. the fact that necessary expropriations of private landowners are not allowed according to the national Constitution (similar Ramsauer, 2000, 607). In this case the widely accepted rule applies, that a member state cannot refer to provisions, practices or circumstances in its own national legal order as a justification for failing to fulfill the obligations of a directive (e.g. ECJ, 1984; cf. Nordberg, 2001). Only if an expropriation were inadmissible according to European standards, it would be correct to exclude that alternative. But, generally in the European legal tradition expropriations are allowed to satisfy public interests, and while we are touching on the subject of plans or projects of public interest, they are also allowed, consequently, for purposes of nature conservation. This also has to be acknowledged for the case that the area expropriated does not itself serve nature conservation purposes, but is needed for the promotion of different public interest without impairing the aim of nature conservation.

In its opinion to the "Mühlenberger Loch" case the Commission accepted that the company excluded alternative solutions only on the grounds that the expected gain in productivity would be lost, that the only appropriate area in Germany was in Hamburg-Finkenwerder and that the administration excluded other sites in this area for technical reasons (non-fulfilment of functional requirements) and for the reason that necessary expropriations of private landowners "for private projects of this kind" were not allowed according to German Basic Law. From the Commission's synopsis of reasoning it is unclear whether the alternatives were technically unavailable (a), legally unavailable (b) or were disproportionately costly due to higher costs for construction, additional training of workers, more expensive logistics etc. - no matter who would bear or would have to bear these additional costs (c) (cf. Ramsauer, 2000, 606 to the question, which costs can be taken into account). "(a)" would have been uncomplicated, if sites all over Europe had been considered. As regards (b), there is either a contradiction in the classification of the project as being only of private interest, of public interest, or a contradiction to the abovementioned compliance rule. Whether "(c)" was the case or not, cannot be derived from the information given in the opinion of the European Commission (2000), nevertheless it does not seem that the Commission or the German authorities exert much effort on this issue.

Once the most environmentally friendly alternative is identified, the question remains whether the public interest it serves imperatively overrides the nature conservation interest. Here, of course, a minimum standard of rationality has to be applied. Similar to the thorough-

<sup>(</sup>BVerwG 2003). The "zero-option" is not really an "alternative", but is equivalent to the subsequent consideration according to Art. 6(4) HD.

ness of the inquiry and assessment of the "implications of the site in view of the site's conservation objectives" an inquiry concerning the expected positive effects for the public interest has to be carried out (similar BVerwG, 2000). In the case of uncertainty on the "environmental side" the precautionary principle can be and has to be applied (cf. ECJ, 2004, para. 44). In the case of uncertainty on the other side, the authorities may have a political margin for assessment of the expected effects, but it needs a scientifically sound basis. Once these factual properties of the plan or project are sufficiently ascertained, the proper consideration can take place.

What economic or social interests qualify as imperative and overriding reasons? The Commission regards plans or projects "within the framework of fundamental policies for the State and society" or "within the framework of carrying out activities of an economic or social nature, fulfilling specific obligations of public service" (especially transport, energy or communications services) as being capable of overriding the environmental interest (2000, 44), excluding projects that lie entirely in the interest of companies or individuals. In times of high unemployment, where the creation of every single new job seems to be of public interest, these criteria do not allow much room for discrimination. By way of contrast, the European Commission has acknowledged in the "Mühlenberger Loch"-case (2000a) that both the creation of new jobs and promotion of the European aircraft industry are capable of being public interests and they have accepted that it is only the expected gain in productivity that excludes alternative solutions. They also assured that a large number of jobs for the region of Hamburg would be created directly and indirectly by the project (4000 according to VG Hamburg 2001). In principle, the restriction on services of public interest seems reasonable, but there is still no clear-cut and European wide accepted definition or set of criteria for their identification (cf. European Commission 2004c). Historically, they are very often services that are traditionally provided by public authorities, but with respect to ongoing liberalization and privatization, this characteristic dissolves and there is no commonly accepted answer for the question- what goods are to be provided as public goods? The areas explicitly mentioned by the Commission belong to those, for which SD is still on its way to becoming integrated via impact assessment. Therefore, projects in these areas have to be assessed in a wider policy context (cf. Holder, 2004, 402).

Economic and social interests can be situated at different levels (European, national, local), but which level is the most relevant? In other words, does significant progress within the regional or national economy outweigh the loss of a natural habitat of European importance? When proposed in this manner, the answer to the question is, inevitably: No! Only substantial progress in the European economy would be able to outweigh the loss of a natural habitat of European importance. Since the economy of the European Union – still after the enlargement – is al-

together highly developed, there is hardly any project conceivable that could be admissible on that basis. The improvement of the competitive position of an industry, which is still dependent on subsidies, probably does not have any significant effect on the overall performance of the European economy. However, a more detailed analysis of this aspect (than was published by the Commission) would have been required and, as shown above, a more extensive examination of possible alternatives as well.

However, sustainable development also has the dimension of intragenerational justice. From this angle it is difficult to justify permanently cementing the present regional differences throughout Europe, especially after the enlargement. In this respect the economic objective in Art. 2 EC "convergence of economic performance" is in line with SD. Therefore, projects serving regional economic development may constitute an imperative reason of overriding public interest, but only if economic development of that benefiting area lags significantly far behind the Community level and not throughout the whole Community. This idea is especially in accordance with the idea of Art. 174(3) EC, regardless of whether the reference of Art. 6 EC refers to this provision or not (in favour: Epiney, 2005, 111 and presumably Dhondt, 2003, 77; against: Beaucamp, 2002, 156).

The main criterion used by the European structural funds for identifying eligible regions (per capita GDP below 75% of the Community average) seems to be appropriate for this purpose, and the Commission in its opinion in the Peene-case (European Commission, 1996, 15) argues in this direction, but also refers to the high rate of unemployment without naming sufficient conditions for their significance (e.g. threshold values). A stricter rule would be application of the widely accepted poverty measure: below 50% of per capita GDP.

This criterion is not identical with the requirement of a site-specificity of the project, which demands that the project serving the public interest must have special links to the site. Interests that could be realized everywhere, such as general improvement of the economic situation or economic use of areas, are not site specific and, therefore, cannot be imperative (Ramsauer, 2000, 604). This criterion seems to be largely equivalent to the examination of alternative solutions: if an interest is not site-specific, than there will certainly be spatial alternatives available.

"Development lag" is only a relative criterion, as it is not the absolute level of economic development, which is relevant, but the relative position within the Community. It is also only a necessary condition, but not a sufficient one. Therefore, it has to be additionally stated that the economic benefits for the area/region must also be significant in terms of per capita GDP, and that it should be mainly to the advantage of the regional population and not just for those yet to move to that region. Moreover, in order to be overriding, the economic interest must consist of

a substantial long-term increase in the relevant figures, for the loss is equally long-term (similar European Commission, 2000, 43 f.). "Long-term" is not – and with respect to the SD requirement –shall not be restricted to the lifetime of those presently living, but embraces future generations (cf. Holder, 2004, 406). One could conceive of a complementary standard that compares the per capita GDP within the region with the average level of the member state (similar European Commission, 1996, 15), but this again would be discriminatory against the less developed member states.

Finally, economic advancement should not only be in terms of GDP, but also in terms of the total economic value, including use and non-use values. There are, of course, many methodological difficulties involved in complying with this request; this becomes obvious at the implementation of Art. 9 of the Water Framework Directive (cf. Unnerstall/Messner 2005).

In any case, a marginal or slight prevalence is not sufficient – an overriding economic justification can only be "imperative" if it substantially outweighs the conservation interest. In this case it is likely that it will be acknowledged throughout Europe and will not be accepted just for ideological, speculative or arbitrary reasons, which would not be sufficient to be classified as "imperative" (Ramsauer, 2000, 604). In the Peene-Case the European Commission (1996) justified the project – the motorway A-20 – by referring to the trans-European road network to which it belongs. But as long as the establishment of this network is not subjected to a "sustainability impact assessment" as required by Art. 6 EC, projects will no longer be justified by simply referring to such a (previously made) conceptual decision. The case of transport-infrastructure shows that certain concepts regarding what promotes economic development often have ideological traits: Its development is regarded as public interest in itself (cf. e.g. Schrödter, 2001, 15). Increased traffic serves as an indicator for economic growth, while it is simultaneously: 1) one of the most important single sources of environmental problems (energy consumption, air pollution, noise, land consumption etc.) and 2) an on-going object of the (so far fruitless) attempt at integration according to Art. 6 EC (cf. Dhondt 2003, 293 ff., Beaucamp, 2002, 158 and Niestedt, 1999, 27 ff.).

According to the Commission (European Commission, 2000, 45), compensatory measures consist of:

- "recreating a habitat on a new or enlarged site, to be incorporated into Natura 2000;
- improving a habitat on part of the site or on another Natura 2000 site, proportional to the loss due to the project;
- in exceptional cases, proposing a new site under the 'Habitats' Directive."

It is clear that technical (man-made) substitutes are no possible compensation. Within the framework of constant natural capital, the third possibility seems inadequate, because the 'overall-sum' of the sites decreases. Whether the first two options are in accordance with preservation of natural capital is determined by the question of whether the measures must provide a full equivalent to the loss of ecological functions relevant to the inclusion of the site in Natura 2000 or only an equivalent to the site's network function. The Commission interprets 'overall coherence' according to the other occurrences of the term as 'overall ecological' coherence. Therefore, the compensatory measures proposed for a project should (European Commission 2000, 46):

- address, in comparable proportions, the habitats and species negatively affected;
- concern the same bio-geographical region in the same Member State; and
- provide functions comparable to those which had justified the selection criteria of the original site.

This sounds like a full equivalent. The preservation of the network can only be ensured by recreating/improving a habitat of the same kind (cf. in favour of this interpretation: J. Schumacher/A. Schumacher in Fischer-Hüftle et al., 2003, § 34 no. 73 and Gassner in Gassner et al., 2003, § 34 no. 43; but also dissenting Marzik/Willrich, 2004 § 34 no. 20). This is in accordance with the idea of maintaining natural capital, as one type of natural habitat is no substitute for another type.

#### 3.2 Art. 4(7) WFD

The Water Framework Directive establishes integrated river basin district management throughout the Community in order to maintain and improve the aquatic environment for the protection and sustainable use of water. The main environmental objective is to achieve a good status for all types of waters (lakes and rivers, groundwater, coastal waters, etc., divided into water bodies) in need of improvement within 15 years, and to prevent the deterioration of water bodies that have already achieved a good or high status. There are multiple exception clauses regarding the objective itself, the deadlines and the prohibition of deterioration. The quality standards are defined separately for the different types of waters, but are structurally similar and can be summarized as follows:

High status is defined as: no, or only very minor, anthropogenic alterations to the values of the relevant physico-chemical and hydromorphological quality elements for the water body type from those normally associated with that type under undisturbed conditions. The values of the relevant biological quality elements for the water body reflect those normally associated with that type under undisturbed conditions, and show no, or only very minor, evidence of distortion.

Good status: The values of the relevant biological quality elements for the water body type show low levels of distortion resulting from human activity, but deviate only slightly from those normally associated with the water body type under undisturbed conditions. The relevant physico-chemical and hydromorphological quality elements are related to the biological quality elements. Temperature, oxygen balance, pH, acid neutralising capacity and salinity do not reach levels outside the range established so as to ensure the functioning of the type-specific ecosystem and the achievement of the values specified above for the biological quality elements. Nutrient concentrations do not exceed the levels established, so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.

Apart from the general aim "sustainable use of water" (Preamble and Art. 1 WFD), the word 'sustainable' occurs in Art. 4 WFD in two exception clauses in the form of "sustainable human development activity" (SHDA). The first one deals with non-compliance with the objective of achieving a good ecological status in the case of Heavily Modified Water Bodies (HMWB) (Art. 4(3)), wherein the environmental objective can be generally reduced to "good ecological potential" (Art. 4(1)(a)(iii) WFD). The second one deals with non-compliance with the prohibition of deterioration from a high status to a good status (Art. 4(7)). In addition, the phrase "benefits for sustainable development" occurs in Art. 4(7)(c) for the justification of any breach of the objectives in Art. 4(1) WFD.

As regards HMWB, Art. 4(3) WFD allows for deviation from the obligation to restore the hydromorphological conditions required for the achievement of a good ecological status if a sustainable human development activity would be significantly impaired by restoration. Art. 4(3) WFD lists some activities as "sustainable human development activities" (such as navigation, recreation, flood protection, storage for drinking water supply). For these activities, no additional test of their sustainability is required (cf. Grimeaud, 2001a, 49). They are the standard to be used to classify other activities as SHDA, and are as equally important. Analysing the explicitly named activities in Art. 4(3)(a)(i-iv) WFD shows that they could be subsumed under the heading "(commercial) services fulfilling missions of general interest and fulfilling specific obligations of public service" and thus "services of general interest". Therefore, only private projects cannot be SHDA. The CIS working group on HMWB has identified urbanisation as an additional SHDA (CIS HMWB, 2003, 42). The restriction of SD to regions with a development lag suggested for HD is not applicable here, since the assessment of activities already pursued requires an absolute standard, a weighing up of the loss by abandoning the activity with the gain in natural capital. Here again, the results may differ whether they are carried out in an industrialized region or one with a development lag, as the relative importance of an activity and the value of environmental improvement change. Any activity that would be admissible under Art. 4(7) WFD may be main-

tained under Art. 4(3) WFD. However, from a legal point of view, it seems quite normal to treat current practices differently from new activities that have yet to be established.

There is also a test of alternative solution to be carried out: according to Art. 4(3)(b) the question has to be answered whether

"the beneficial objectives served by the artificial or modified characteristics of the water body cannot, for reasons of technical feasibility or disproportionate costs, reasonably be achieved by other means, which are a significantly better environmental option."

Again, the spatial and functional scope of the "beneficial objective" defines the scope of alternative solutions and may not be interpreted narrowly (WATECO 2002, ANNEX IV.II(b), 4): System alternatives have to be considered too. This requires an assessment of the costs of alternative means that would achieve the beneficial (non-environmental) objectives, but only if they are a significant better environmental option. These costs – without the restoration costs – have to be compared to those of the currently employed solution. Although this "cost-effectiveness" approach can take account of costs other than purely 'financial' ones (maintenance costs, capital costs, foregone benefits, etc.) such as 'social', 'distributional' and 'environmental and resource' costs, the scope of the weighing up in order to determine the "disproportionality" of the costs is limited: it is the marginal costs of the alternative solution (including opportunity costs in terms of lower non-environmental performance) v. the gain of environmental quality or nature capital (Grimeaud, 2001a, 49), but not the economic value of the non-environmental activity v. the value of an unimpaired water body. It is questionable whether this approach really does comply with the general aim of the "sustainable use of water" established in the Preamble of the WFD and derived from primary law. An effective implementation of this aim seems to require an overall cost-benefit-analysis (CBA) of the economic benefits and losses caused in the course of pursuing the beneficial objective (in favour of an overall CBA: WATECO, 2002, IV.II(b)4). This transition could only be reached by including the zero-option, wherein the loss of the nonenvironmental benefits counts as costs. But the beneficial objective is not negotiable, even if it is of low economic value. In this case it can be simply argued that there is possibly no beneficial objective in terms of CBA. Therefore, the CBA can be used to judge the activities explicitly mentioned in Art. 4(3)(a)(i-iv) WFD. An argument against this interpretation of Art. 4(3)(b) is that Art. 4(7)(d) WFD explicitly mentions this overall weighing-up for the case of new activities, but the consequence of a redundancy does not exclude a certain interpretation.

An SHDA can also justify the deterioration of a body of surface water from high to good status: Art. 4(7) 2<sup>nd</sup> ind. WFD. In this provision "new sustainable human development activities" refers not only to "changes of the hydromorphological characteristics", as laid down in § 27d(3)(2) and

§ 25b(2) no. 1 German Water Act implementing the WFD, but equally to any activity changing the biological or chemical and physico-chemical status. In the case that the good status is missed due to new activities (Art. 4(7) 1<sup>st</sup> ind.), no SDHA is required, as long as the other conditions are fulfilled – being the only restriction and, therefore, of crucial importance. The context in Art. 4(7) 2<sup>st</sup> ind. – unlike Art. 4 (3) – does not indicate that only "services of general interest" may be permissible under this clause, but this restriction may be transferred. In order to determine the sustainability of an activity, WATECO (2002, IV.II(a) 5) suggests two steps of evaluation: firstly, a comprehensive assessment of the implications from an economic, social and environmental angle, and secondly, an assessment of the coherence between the activity and existing local, regional, national and European SD plans or strategies in order to ensure that the activity is put into a long-term sustainability perspective and that its contribution to the broader objectives is assessed. These conditions do not offer any material criterion as to whether an activity is sustainable and postpones the answer to the broader SD plans.

However, the conditions set out in Art. 4(7)(c) and (d) WFD have to be met in addition. They are mainly relevant to any failure to achieve the environmental objectives in Art. 4(1) caused by new activities. Art. 4(7)(d) is essentially identical with the familiar Art. 4(3)(b), and can be understood as presented above. Art. 4(7)(c) WFD is quite similar to Art. 6(4) HD. It equally requires "overriding public interests" but not "imperative reasons" for justifiably deviating from environmental objectives – including those of economic or social nature, although they are not explicitly mentioned like in Art. 6(4) HD, as they serve only as examples for the types of interest (presumably dissenting Grimeaud, 2001b, 96). The fact that HD requires additional compensation measures is insignificant as they are not – as shown above – part of the consideration. Admittedly, only the WFD directly refers to "SD". Art. 4(7)(c) WFD has two alternatives: "overriding interest" and "benefits ... are outweighed by benefits ...". Both options seem to be almost synonymous; at least there is a relationship of inclusion: if the said benefits (within their limited scope) are outweighed, then there is an overriding interest. The benefits for sustainable development mentioned in Art. 4(7)(c) again include benefits of an economic and social nature (similar Grimeaud, 2001b, 96).

The question, whether interests are overriding or benefits prevail has to be decided with respect to the application of Art. 6 EC, i.e. the aim of SD, as already demonstrated for Art. 6(4) HD, especially regarding the spatial dimension. Application of this exception clause is possible only if two necessary conditions are met:

 the region in which the water body is located has significant development lags compared to the Community average; and

2) the present population of the region will profit from the benefits arising from the exception.

"Unfortunately", the Commission had proposed this sort of regional approach in its opinion on the European Parliament's amendments to the Council's common position (European Commission 2000b), where it refers to the "sustainable development of the local areas in which the water body is located" – but this idea was not adopted in the final version of the WFD. Therefore it seems doubtful whether a similar idea may be revived by interpretation. The motives of the Commission and the reasoning of the Conciliation Commission for abandoning the Commission's idea remain obscure, as the discussion process is not documented. The regional approach is derived from the idea of sustainable development and its component 'common but differentiated responsibility'. Therefore, this interpretation is presumably more clearly motivated and can be upheld against the argument from the process of legislation.

#### 4. Conclusion

The establishment of SD as an aim of the EU in its primary law influences the interpretation of secondary law. Wherever environmental and other interests need to be weighed up, the yardstick used must be the concept of SD, especially the idea of common but differentiated responsibility. This aspect has been ignored so far within the interpretation of European Community Law. The statements of the different institutions of the Community on SD do not provide usable concepts for necessary case-by-case weighing ups within the exception clauses of secondary law (HD and WFD). By way of a first approximation, this paper suggests a material, spatial differentiated interpretation that restricts the possible application of these clauses to regions in Europe, whose economic development lags far behind the Community level, indicated by a per capita GDP below 75%, or 50% below the Community level. This concept facilitates application of the derogation clauses and opens the idea of environmental integration to a dimension yet neglected.

#### References

- Aage H. 1984. Economic Arguments on the Sufficiency of Natural Resources, *Cambridge Journal of Economics* **8**: 105 ff.
- Ali A. 2002. A Conceptual Framework for Environmental Justice Based on Shared but Differentiated Responsibilities, CSERGE Working Paper EDM 01-02.
- Baldock D. 2002. The EU Sustainable Development Strategy: From Lisbon to Göteborg and Beyond An Evaluation of Progress, Prepared for the European Economic and Social Committee.
- Barry B. 1999. Sustainability and Intergenerational Justice. In: A. Dobson, Fairness and Futurity, Essays on Environmental Sustainability and Social Justice, Oxford, Oxford University Press: 93-117.
- Beaucamp G. 2002. Das Konzept der zukunftsfähigen Entwicklung im Recht, Tübingen
- Black's Law Dictionary. 1979. 5th ed. by the Publisher's Editorial Staff.
- Brown Weiss E. 1995. Environmental Equity: The Imperative for the Twenty-First Century. In: W. Lang (ed.): *Sustainable Development and International Law*, Graham & Trotman/Martinus Nijhoff, London, Dordrecht, Boston: 17-27.
- Brown-Weiss E. 1995. In Fairness to Future Generations.
- BUND and Misereor (ed.). 1996. Zukunftsfähiges Deutschland, Basel.
- BVerwG (Bundesverwaltungsgericht/Federal Administration Court). 2003. Urteil vom 17. Mai 2002 4 A 28.01, Zeitschrift für Umweltrecht 14,1: 22-26.
- BVerwG (Bundesverwaltungsgericht/Federal Administration Court). 2000. Urteil vom 27. Januar 2000 4 C 2.99. Zeitschrift für Baurecht: 343-347.
- Callies Ch. and Ruffert M. 1999. Kommentar zum EU-Vertrag und EG-Vertrag, Luchterhand, Neuwied.
- Calster G. v. 2002. Public Environmental Law in The European Union. in: R. J. G. H. Seerden et.al. (eds.). *Public Environmental Law in the European Union and the United States*: 465-515
- CFI (Court of First instance). 2002. Judgement of the 22.11.2002, Case T-74/00 a. o., Artegodan GmbH and others v Commission of the European Communities, European Court reports, 2002, II-04945.
- Chowdhury S. R. 1995. Common but differentiated responsibility in international environmental law: from Stockholm (1972) to Rio (1992). In: K. Ginther, E. Denters and P.J.I.M. de Waart (ed.): *Sustainable Development and Good Goverance*, Martinus Nijhoff, London, Dordrecht, Boston: 322-342.
- CIS HMWB 2003. On Identification and Designation of Heavily Modified and Artificial Water Bodies.
- Coenen R. and Grunwald A. (ed.) 2003. Nachhaltigkeitsprobleme in Deutschland,
- Cordonier Segger, M.-C., Khalfan, A. and Nakjavani, S. 2002. Weaving the Rules For Our Common Future: Principle, Practices and Prospects For International Sustainable Development Law, <a href="http://www.cisdl.org/wtr/pdf/WeavingtheRulesOct2002.pdf">http://www.cisdl.org/wtr/pdf/WeavingtheRulesOct2002.pdf</a>

CSD (Commission on Sustainable Development) 2001. Indicators of Sustainable Development: Guidelines and Methodologies.

- Declaris M. 2000. The law of sustainable development General principles (A Report produced for the European Commission), Luxemburg.
- DG Trade. 2003. Sustainability Impact Assessment of Trade Agreements: Making Trade Sustainable? Background paper prepared for the DG Trade Seminar on SIA 6.-7.2.2003.
- DG Trade. 2004. Sustainability Impact Assessment (SIA) Methodology: Towards an upgrade in 2004.
- Dworkin R. 1981. What Is Equality? Part 2: Equality of Resources. *Philosophy and Public Affairs* **10**: 283-345.
- ECJ (European Court of Justice). 1984. Judgment of the Court of 5 June 1984, Case 280/83. European Court reports, 1984, Page 02361.
- ECJ (European Court of Justice). 1986. Judgment of the Court (Fifth Chamber) of 25 November 1986, Joined cases 201 and 202/85, *European Court reports*, 1986, Page 03477.
- ECJ (European Court of Justice). 1991. Judgment of the Court (Fifth Chamber) of 21 March 1991, Case C-314/89, European Court reports, 1991, Page I-01647.
- ECJ (European Court of Justice). 1993. Judgment of the Court (Third Chamber) of 19 May 1993, Case C-81/91, European Court reports, 1993, Page I-02455.
- ECJ (European Court of Justice). 1994. Judgment of the Court (Third Chamber) of 27 January 1994, Case C-98/91, European Court reports, 1994, Page I-00223.
- ECJ (European Court of Justice). 2000a. Judgment of the Court of 21 March 2000, Case C-6/99 21.3.2000, European Court reports 2000 Page I-01651.
- ECJ (European Court of Justice). 2000b. Judgment of the Court (Fifth Chamber) of 15 June 2000. Joined Cases C-418/97 and 419/97, European Court reports 2000 Page I-04475.
- ECJ (European Court of Justice). 2004. Judgment of the Court (Grand Chamber) of 7 September 2004, Case C-127/02.
- Epinay A. 2005. Umweltrecht in der Europäischen Union, Köln a.o.
- European Commission. 2000. Managing Natura 2000 Sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission. 2000a. Stellungnahme der Kommission vom 19.4.2000 gegeben auf Ersuchen Deutschlands nach Artikel 6 Absatz 4 der Richtlinie des Rates 92/43/EWG vom 21. Mai 1992 zum Schutz der natürlichen Lebensräume und der wildlebenden Tiere und Pflanzen; diese Stellungnahme betrifft die Erweiterung des Betriebsgeländes von Daimler Chrysler Airbus GmbH (DASA) in Hamburg-Finkenwerder, Deutschland, K(2000) 1079.
- European Commission. 2000b. Opinion of the Commission pursuant to Article 251 (2) (c) of the EC Treaty, on the European Parliament's amendments to the Council's common position regarding the Proposal for a European Parliament and Council Directive establishing a framework for Community action in the field of water policy (COM(97)49 final, COM(97)614 final, COM(98)76 final and COM(99)271 final) amending the proposal of the Commission pursuant to Article 250 (2) of the EC Treaty, COM (2000) 219 final, 1997/0067 (COD), Brussels, 05.06.2000.

- European Commission. 2001. A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development (Communication from the Commission), 15.5.2001, COM(2001) 246 final.
- European Commission. 2001a. Assessment of plans and projects significantly affecting Natura 2000 sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, November 2001.
- European Commission. 2002. Communication from the Commission on Impact Assessment, 5.6.2002. COM(2002) 276 final.
- European Commission. 2002a. Commission Staff Working Paper in support of the Report from the Commission to the Spring European Council in Barcelona {COM(2002)14 final}: The Lishon Strategy Making Change Happen, SEC (2002) 29/2 of 24.1.2002.
- European Commission. 2003. Choosing to grow: Knowledge, innovation and jobs in a cohesive society— Commission Staff Working Paper in support of the report from the Commission to the Spring European Council, 21 March 2003, on the Lisbon strategy of economic, social and environmental renewal, SEC(2003) 25.
- European Commission. 2004. Integrating environmental considerations into other policy areas- a stocktaking of the Cardiff process, Commission Working Document. 1.6.2004. COM(2004) 394 final.
- European Commission. 2004a. Background Document Preliminary Impact Assessments European Commissions Legislative and Work Programme 2004.
- European Commission. 2004b: Report from the Commission to the spring European Council: Delivering Lisbon Reforms for the enlarged Union. 20.2.2004, COM (2004) 29 final/2.
- European Commission. 2004c. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions White Paper on services of general interest, COM(2004) 374 final of 12.5.2004, Brussels.
- European Community. 1993. Resolution of the Council and the Representatives of the Governments of the Member States, meeting within the Council of 1 February 1993 on a Community programme of policy and action in relation to the environment and sustainable development A European Community programme of policy and action in relation to the environment and sustainable development, OJ C 138 of 17.5.1993: 1 ff.
- European Council. 1997a. Presidency Conclusions Amsterdam European Council 16. and 17. June 1997.
- European Council. 1997b. Presidency Conclusions Luxemburg European Council 12. and 13. December 1997.
- European Council. 1998. Presidency Conclusions Cardiff European Council 15 and 16 June 1998.
- European Council. 2000. Presidency Conclusions Lisbon European Council 23 and 24 March 2000.
- European Council. 2001. Presidency Conclusions Göteborg European Council 15 and 16 June 2001.
- European Parliament. 2001. Opinion of the Economic and Social Committee on the Preparation of a European Union strategy for Sustainable Development', OJ C 221 of 7.8.2001: 169-177.
- Eurostat. 2004. Preliminary list of Sustainable Development Indicators Revision 4 (4/11/2004), Doc. SDI/TF/44/04 Rev. 4 (2004).

Fischer-Hüftle P., Herter W., Kratsch D., Schumacher A., Schumacher J. 2003. *Bundesnaturschutz-gesetz – Kommentar*, Stuttgart.

- Frenz W. and Unnerstall H. 1999. Nachhaltige Entwicklung im Europarecht, Baden-Baden
- Gellermann M. 2001. Natura 2000. 2<sup>nd</sup> ed.
- Ginther K. 1995. Comments on the Paper by Edith Brown Weiss. In: W. Lang (ed.): *Sustainable Development and International Law*. Graham & Trotman/Martinus Nijhoff, London, Dordrecht, Boston: 29-33.
- Grimeaud D. 2001a. Reforming EU Water Law: Towards sustainability (I)?, European Environmental Law Review 10, 2: 41-51
- Grimeaud D. 2001b. Reforming EU Water Law: Towards sustainability (II)?, European Environmental Law Review 10, 3: 88-97.
- Harborth H.-J. 1993. Dauerhafte Entwicklung statt globaler Selbstzerstörung. Eine Einführung in das Konzept des Sustainable Development, Berlin 1993.
- Holder J. 2004. Overriding Public Interest in Planning and Conservation Law Analysis of the Case Newsum and others v. Welch Assembly Government, *Journal of Environmental Law* **16**, 3: 377-407.
- Hösch U. 2004. Die Rechtsprechung des Bundesverwaltungsgerichtes zu Natura-2000-Gebieten, *Natur und Recht* **26**: 348-355.
- Jans J. H. 2000. European Environmental Law. 2<sup>nd</sup> rev. ed.
- Kidd C.V. 1992. The Evolution of Sustainability, *Journal of Agricultural and Environmental Ethics* 5(1): 1-26.
- Krebs A. 2001. Wieviel Natur schulden wir der Zukunft? Eine Kritik der zukunftsethischen Egalitarismus. In: D. Birnbacher und G. Brudermüller (eds.), Zukunftsverantwortung und Generationengerechtigkeit, Würzburg: 157-183.
- Liederkerke L. v. 1992. Ecology and Intergenerational Equity. In: P. Koslowski (ed.), *Ethics in Economics, Business and Economic Policy*, Berlin: 159-181.
- Marzik U. and Willrich Th. 2004. Bundesnaturschutzgesetz, Nomos, Baden-Baden
- Niestedt M. 1999. Das Integrationsprinzip nach Art. 6 EGV: Grundsätze und Organisation der Berücksichtigung umweltpolitischer Belange in anderen Politiken, WHI (Walter-Hallstein-Institut)-Paper 5/99.
- Nordberg, L. 2001. Recent Questions of interpretation Concerning Art. 6 of the Habitats Directive, Translation of the article published in Ympäristöjuridiikka 4/2001 (http://arkisto.sll.fi/tiedotus/Natura/NordbergArt.6.html).
- OECD. 1999. The Interim Report on the OECD Three-Year Project on Sustainable development.
- Ott K. (2004). Essential Components of Future Ethics. In R. Döring and M. Rühs (ed): Ökonomische Rationalität und praktische Vernunft, Würzburg: 83-108.
- Ott K. and Döring R. 2003. Strong sustainability and Environmental Policy in Germany The position of the German Council of Environmental Advisers on strong sustainability and its implementation in prac-

- *tical policy*. Paper for a focused group discussion at the FRONTIER II Conference (Tenerife 12.-15.02.03).
- Ott K. and Döring R. 2004. Theorie und Praxis starker Nachhaltigkeit, Metropolis
- Pearce D. 2000. Public Policy and Natural Resources Management A framework of integrating concepts and methodologies for policy evaluation, Prepared for DGXI, European Commission, September 2000.
- Pearce D. W. Markandya A. and Barbier E. B. 1989. Blueprint for a Green Economy, London, Earthscan.
- Pearce D.W. and Turner R.K. 1990. Economics of Natural Resources and the Environment, New York.
- Ramsauer U. 2000. Die Ausnahmeregelung des Art. 6 Abs. 4 der FFH-Richtlinie, *Natur und Recht* **22**, 11: 601-611.
- Rawls J. 1971. A Theory of Justice, Cambridge, Harvard University Press.
- Rees W. and Wackernagel M. 1997. Unser ökologischer Fußabdruck Wie der Mensch Einfluß auf die Umwelt nimmt, Basel.
- Rothgang M. 1997. Ökonomische Perspektiven des Naturschutzes, Duncker & Humblot, Berlin.
- Sands Ph. (1995): Principles of international environmental law. Vol. 1: Frameworks, standards, and implementation. Manchester University Press.
- Schröder M. (2003). § 9: Umweltschutz als Gemeinschaftsziel und Grundsätze des Umweltschutzes, in: H.-W. Rengeling (Hrsg.), *Handbuch zum europäischen und deutschen Umweltrecht*, Heymanns, Köln a. o., 2. ed.: 199-238.
- Schrödter W. 2001. Bauleitplanung in FFH-Gebieten und Vogelschutzgebieten, *Natur und Recht* **23**,1: 8-19.
- Schwarze R. (ed.) 2003. *Intergenerational Justice and Sustainability Economic Theory and Measurement,* Expert workshop held at the DIW 15.-16.4.2003 Proceedings. DIW Research Notes 32.
- Sheate W. R. 2003. The EC Directive on Strategic Environmental Assessment: A Much-Needed Boost for Environmental Integration. In: *European Environmental Law Review* 12: 331-347.
- SRU (German Advisory Council on the Environment). 2002. *Umweltbericht 2002* (Environmental Report 2002); Bundestagsdrucksache (Bundestag Publication) 14/8792.
- Stetter S. 2001. Maastricht, Amsterdam and Nice: The Environmental Lobby and Greening the Treaties. In: *European Environmental Law Review* **10**: 150-159.
- Syngellakis A. 1993. The Concept of Sustainable Development in European Community Law and Policy, *The Cambrian Law Review* **24**: 59-77.
- Timoshenko A. S. 1995. From Stockholm to Rio: The Institutionalization of Sustainable Development. In: W. Lang (ed.): *Sustainable Development and International Law*, Graham & Trotman/Martinus Nijhoff, London, Dordrecht, Boston: 143-160.
- UBA (Umweltbundesamt). 1997. Nachhaltiges Deutschland, Berlin.
- Unnerstall H. 1999. Rechte zukünftiger Generationen, Würzburg.

Unnerstall H. and Messner F. 2005. Full Cost Recovery Water Prices for River Basin Management – Perspectives in Germany and the EU. In: Erickson, J., Messner, F., Ring, I. (Ed.), Sustainable Watershed Management in Theory and Practice, Elsevier Science (forthcoming).

- VG Hamburg (Verwaltungsgericht/Administrative Court Hamburg) 2001. Beschluss vom 15.1.2001 (15 VG 3932/2000).
- Visser t'Hooft H. Ph. 1999. *Justice to Future Generations and the Environment*, Dordrecht, Boston, London.
- Wasmeier M. 2001. The Integration of Environmental Protection as a General Rule for Interpreting Community Law. In: Common Market Law Review Vol. 38: 159-177
- WATECO 2002. Economics and the Environment: The Implementation Challenge of the Water Framework Directive Accompanying Documents to the Guidance.
- WCED (World Commission on Environment and Development) 1987. Our Common Future, Oxford a. o.
- Weihrich D. 1999. Rechtliche und naturschutzfachliche Anforderungen an die Verträglichkeitsprüfung nach § 19 c BNatSchG, *Deutsches Verwaltungsblatt* 1999, 24: 1697- 1704.
- Winter G. 2003. Environmental Principles in Community Law, in: Jans, Jan H. (ed.), *The European Convention and the Future of European Environmental Law*, Proceedings of the Avosetta Group of European Environmental Lawyers, Amsterdam: 3 25.
- Wrase J. 2004. Ausnahmen vom FFH-Schutzregime, Natur und Recht 26: 356-359.