

Sustainability—A Long, Hard Road

Ferdinand Kerschner and Erika Wagner

Abstract Sustainability—a term comprising a group of themes and being of immense importance for today’s and all future generations. It has developed in last decades to one of the most central concepts in environmental law and poses an important component of political and juridical aims. The Treaty of Amsterdam implemented sustainability in primary law as a basic objective of the European Union. As a consequence, the EU established the Sustainable Development Strategy (EU SDS) with the aim to improve the living situation of all generations. Also on a national level, many measures have been taken to enhance the “sustainable development” approach. But one has to ask the question: does the concept of sustainability work? Do the measures taken, inter alia, in the fields of transport, energy, climate change and waste management lead to the desired success or is it just a sublime goal, a program without (sufficient) implementation? Or is it even just a tokenism?

Keywords Sustainable development · Environmental law · Climate change law · Traffic law · Industrial plant law · Energy law

1 Historical Way to Sustainability

1.1 *International Law*

In his opus “silvicultura oeconomica” the German Hans Carl von Carlowitz formulated the concept of sustainability for the first time for the forestry sector (von Carlowitz 1713, pp. 105–106). His approach of “Nachhaltigkeit” (German

F. Kerschner (✉) · E. Wagner
Johannes Kepler University, Linz, Austria
e-mail: Ferdinand.Kerschner@jku.at

E. Wagner
e-mail: Erika.Wagner@jku.at

term for “sustainability”) influenced the Austrian Forestry Law. On an international level, the thought of sustainable development was defined 1987 for the first time in the so-called Brundtland Report issued by the World Commission on Environment and Development (World Commission on Environment and Development 1987; Epiney and Scheyli 1999). “Sustainable development” was defined therein as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development 1987, p. 8; see also e.g. Wagner 2000; Mauerhofer 2004a; Arbter 2005). In the course of the United Nations Conference on Environment and Development (UNCED) of 1992, the Rio Declaration on Environment and Development and the Agenda 21 were accepted. Although “soft law” instruments (and therefore non-binding), both acts are seen as important achievements in international environmental law (Wagner 2000). In order to review the progress in the implementation of the Rio Declaration and the Agenda 21, the Commission on Sustainable Development (CSD) was established. Disadvantages resulting from the non-enforceability and possible solutions for that were discussed at the World Summit on Sustainable Development which took place in Johannesburg in 2002—with only moderate success. Also the following World Summit in Rio de Janeiro in 2012 (Lengauer 2011; Madner 2011) stayed—to sum up—behind the expectations and initiated the liquidation of the CSD (Kanning 2013; Gareis and Varwick 2014).

1.2 European Union

In EU law, the concept of sustainability was recognized for the first time in the Single European Act—SEA concluded 1986 (Article 130r(1) SEA footnote 9). The term “sustainable development” was, however, not explicitly mentioned, but the legislature referred to prudent and rational utilization of natural resources. With the Treaty of Amsterdam entered into force 1996, the principle of sustainability has been anchored in the Union’s primary law (Article 2 Treaty establishing the European Economic Community—TEEC “harmonic, balanced and sustainable development” and Article 6 TEEC, the horizontal clause relating to environmental protection). Article 6 TEEC stated that the horizontal character should support the achievement of sustainable development. Therefore the horizontal clause obliges to consider the need to promote sustainability when planning or taking measures.

Article 37 Charter of Fundamental Rights of the EU (CFR) was introduced by the Treaty of Nice concluded in 2001 and entered into force in 2003. Its novelty is questionable given that it does not grant a “real” fundamental right to single persons but rather states a general duty of the EU and the Member States to consider environment protection in their policies (Raschauer 2008). Expectations one might have had about a “procedural environmental fundamental right” were disappointed; Article 37 CFR turned out as a purely objective-juridical repetition of Article 6 and 174 TEEC and seems to be misplaced in the Charter of Fundamental Rights due to its character as a non-enforceable objective for the states (Calliess 2011a, b).

2 Sustainability—A Non-Comprehensible Term?

An exact and generally valid definition for “sustainable development” is nearly impossible. As a result of its broad scope, the shimmering and (maybe already too) much used construct of sustainability contains certain ambiguities. One reason for that is the linguistic imprecision caused by the authentic but varying linguistic versions of the acts. The German version uses the concept “nachhaltig”, the English one “sustainable” and the French one “durable” (permanently). Another reason for the lack of clarity originates from the multidisciplinary; countless areas are concerned in many different ways. It can clearly be noted that the basic concept of sustainable development is the integration of the interests of future generations. Human behaviour should not endanger livelihood of future generations. Future generations have a right for a clean environment in which the satisfaction of their needs is ensured (Epiney and Scheyli 1999).

The following postulates can be derived from the principles that were set by the Rio Declaration:

(a) Anthropocentric Approach

Humans are central for the implementation of sustainable development. Protection of nature without considering the needs of people, who live in it, is not intended. The protection of the environment should ensure a healthy and productive life of people under natural living conditions.

(b) Economic Growth

States are allowed to exploit their natural resources according to their own environmental and economic development policy. When doing so, the states have to ensure that the environment of other countries or areas outside their sovereign territory do not take any damage. One could argue that this does not encompass an obligation to protect the domestic environment, and consequently, that a state could, in principle, completely destroy its environment as long as the environmental media of other states are not harmed. This is, in the authors’ opinion, not a legitimate interpretation of the concept of sustainable development. According to its clear wording (“development”), the principle refers to progress as well as economic growth. However, an eternal economic growth is not possible. Facing this limitation, it should in this context, in the authors’ opinion, be rather talked about “environmental economy”. Progress should not be disrupted, but it should be made with due consideration of the impacts on domestic and foreign environment.

(c) Intergenerational Justice

Future generations should not already be deprived today of all opportunities and resources; thus, the present generation should take into account the future needs when taking actions. For the purpose of intergenerational equity, living conditions between members of different generations should not continue to deteriorate.

(d) Ecological Approach

In order to ensure sustainable development, environmental protection must be seen as an integral part—at least equal to economic and social aspects—of the development process. Anything else bears the risk to foil the achievement of sustainable development.

(e) Intragenerational Justice

Sustainable development does not only aim at the protection of future generations, also the improvement of living conditions of the present generation is an important factor. Poverty reduction is a mandatory requirement for the success of the implementation of sustainability because current problems can displace future ones from the field of view and take away all relevance from them.

(f) Access to Information

Raising people's awareness for the need of sustainable development is one of the most crucial factors for the concept's success. Therefore, a first step is environmental education and ecological consciousness-raising of individual citizens (Kerschner et al. 2009). Access to information is necessary to ensure a public counterbalance when tackling environmental problems. Without participation of the general public, the struggle for sustainability is similar to a fight against windmills.

Today, the term “sustainability” is often interpreted as social development, which encompasses economic, environmental and social aspects (Lewis 2011; Bauer and Seebacher 2012). As regards content, the concept of sustainability can be expressed by using a three-pillar model: Environmental dimension (intergenerational equity), social dimension (intragenerational equity) and economic dimension (Grunwald and Kopfmüller 2012). These three dimensions have to be considered in an equal way in when shaping policies or preparing legal acts that are intended to contribute to sustainable development or have an effect on it. It has to be noted that within the three pillars the balance between environmental, economic and social issues was and is not given at all. Since the economic crisis in 2007 economic dimensions have prevailed significantly. The sustainability assessment mentioned in the Amsterdam Treaty (Arbter 2005), which is about a systematic assessment process of legislative acts according to the dimensions of sustainability, cannot change this impression; sustainability is emphasized merely in non-binding documents and seems to be an overused term. The ambitious climate goals are pursued only half-heartedly in all Member States. Acts adopted before 2007, especially environmental impact assessment (EIA), strategic environmental assessment (SEA) and nature impact assessment (NIA), which make a significant and effective contribution of European environmental protection, are not able to overcome the challenges of the 20th century by their own. In addition, they are increasingly hollowed out and stripped of their effectiveness. CO₂ certificate trading has proved to be a “climate poker” with a lot of winners, but barely any losers. The real losers seem to be the future generations, to whom the concept of sustainability is dedicated.

One way to ensure a concrete implementation of programs and targets would be a strict “sustainability assessment”, i.e. an integrated assessment of the potential environmental, social and economic impacts of (legislative) proposals. At a European level, the Commission introduced with the “Impact Assessment” a procedure that serves as kind of test for sustainability of European legislation and policies (EC 2002a). Considerable time pressure when conducting these assessments may affect the quality of the results in a negative way (Arbter 2005). Other points of criticism are the insufficient involvement of Member States and the (by tendency) stronger involvement of interest groups representing the industrial or business sector compared to the involvement of stakeholders representing environmental or social interests (Leith and Speth 2003; Arbter 2005).

SEA, EIA and NIA provide for sustainability insofar as they are designed to safeguard that the absorption capacity of environment is not exceeded and an overuse of resources is prevented. The potential impacts of projects in industry, agriculture, transport, regional planning etc. must be known in advance.

Such upstream sustainability assessments are unavoidable for a comprehensive implementation of the principle of sustainability. It requires, in essence, an orientation on the long-term carrying capacity of the environment and should follow the principle that pollution does not exceed the environment’s absorption capacity and that the consumption of resources is not greater than their regeneration rate (Reese 2010). Consume of fossil fuel should be avoided at all. In order to act sustainably, the actual impact must already be known in advance.

In the following, it will be shown that the effective European development regarding sustainability is at odds with the primary EU law.

3 Legal Framework at European Level

3.1 Primary Law

At primary law level the principle of sustainable development was expressly stipulated in several norms such as shown in the following subchapters.

(a) Preamble of the Treaty of the European Union (TEU)

The preamble of the TEU inter alia states: “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, [...]”. In contrast to the objectives of Article 3 TEU described in the following, the preamble is not legally binding but is of expressive importance and used to interpret the treaty.

(b) Article 3(3) TEU

Article 3(3) TEU normalizes inter alia that “The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment [...]”. Article 3(3) TEU enumerates all areas of sustainable development. Thus, the question which dimension in the context of sustainability predominates (ecological, economic or social) (Wagner 2000), should be off the table (Windoffer 2011). However, it is debatable whether Article 3(3) TEU obliges EU institutions to take action in order to ensure the pursuit of sustainability. The prevailing opinion derives from the aforementioned objectives, which are mentioned in Article 3 TEU and the main provisions of the environmental chapter (Article 191 ff Treaty on the Functioning of the European Union [TFEU]) an obligation to elaborate and implement a general environmental policy (Raschauer 2008; Nettesheim 2014a). But a duty to act in specific cases cannot be deduced (Wagner 2000). However, the provision has to be interpreted in a way that the various aspects of sustainability must be incorporated into the activities of the Union.

A broad discretion for the (ordinary) EU legislature on whether to consider sustainability or promote exclusively economic aspects would infringe primary law. Every promotion of economic aspects must be contemplated in context of the environmental objectives. In the authors’ opinion, focusing on economic aspects only is inadmissible. This result derives a fortiori from Article 11 TFEU which is described later.

(c) Article 3(5) TEU

Article 3(5) TEU states that the European Union “... shall contribute to peace, security, the sustainable development of the Earth, solidarity and mutual respect among peoples, [...]”.

Another new feature that was introduced by the amendment of the Treaty of Lisbon is Article 3(5) TEU; the provision expressly states that the Union shall contribute to global sustainable development.

Article 21(2) lit d and f TEU is closely connected referring thereto by stipulating:

“The Union shall define and pursue common policies and actions, and shall work for a high degree of cooperation in all fields of international relations, in order to:

- (d) foster the sustainable economic, social and environmental development of developing countries, with the primary aim of eradicating poverty;
- (f) help develop international measures to preserve and improve the quality of the environment and the sustainable management of global natural resources, in order to ensure sustainable development;”

Here, Article 3(3) and (5) as well as Article 21(2) lit d and f TEU are made concrete and the objectives of the Union to promote sustainable development (also globally) are emphasized.

(d) Article 11 Treaty of the Functioning of the European Union (TFEU)

Article 11 TFEU (ex Article 6 TEEC) reads as following “Environmental protection requirements must be integrated into the definition and implementation of the Union’s policies and activities, in particular with a view to promoting sustainable development”. It contains a horizontal clause concerning the environment that states an obligation to include environmental considerations when formulating and implementing Union policies and activities. When referring to the “environmental protection requirements”, Article 11 TFEU adds the principles set out in Article 191 TFEU—namely high level of protection, the principles of prevention and precaution, the origin principle and the polluter-pays principle—to the principle of sustainability (Wagner 2000; Nettesheim 2014a, b).

The focus of EU environmental policy should be placed on the ecological capability and the obligation to consider not only economic objectives but also the interests of future generations when taking decisions that may impact environmental quality and resource supply. Bearing the goal of the horizontal clause in mind, this explains all the more that any legislative proposal should undergo a sustainability assessment (Epiney and Scheyli 1999; Calliess 2011a, b).

The integration clause has also unmistakably procedural aspects since the obligation to consider and integrate environmental issues can only be met if it is ensured by appropriate institutional arrangements that the effects of the proposed measure are properly identified and registered (Nettesheim 2014b) and taken into account at the factual implementation. The Sustainable Development Strategy (EU SDS), for instance, can be considered as one of the (indeed not sufficient) attempts of a procedural implementation of Article 11 TFEU (EC 2001).

3.2 *The European Sustainable Development Strategy*

In 2001, the European Council of Gothenburg adopted the previously mentioned “Strategy for Sustainable Development” (EC 2001; Calliess 2011a, b). This so-called Gothenburg Strategy was intended to ensure and support the concept of sustainability in environmental, economic and social policy issues on a long-term basis by setting the framework conditions.

In 2005, a new “EU Sustainable Development Strategy—A platform for action” was adopted by the European Council (EC 2010a, b).

The guiding principles of this strategy are:

- Support and protection of fundamental rights;
- Solidarity within and between generations;
- Guarantee of an open and democratic society;
- Involvement of citizens, businesses and social partners;
- Policy coherence and integration;
- Use of the best available knowledge;
- Precautionary principle and the principle of holding the polluter liable.

The latest strategy was adopted 2010 under the title “Strategy Europe 2020” (EC 2010b).

The Commission identified seven main problematic areas, which urgently call for solutions in order to achieve sustainability. These areas are climate change, the impact of transport, production and consumption, sustainable management of natural resources, public health, social exclusion and poverty and the ageing of society (Council 2009).

Member States are required to develop sustainability strategies and report on them and the progress they make on a regular basis.

Every two years the implementation of the strategy is evaluated by the Commission on the basis of sustainable development indicators (EC 2002b) wherein the ‘open list’ of environment-related headline indicators is analysed, and was subsequently evaluated by the European Council (Council 2009). These indicators consist of the seven most relevant environmental indicators, which have been selected to assess the sustainability strategy.

The European Council is concerned with the implementation of the sustainability strategy in Member States, but obviously without putting sanctions. The strategies are existent on paper and in files. One cannot escape the impression that goal of many of these strategies, programs, principles etc. is to appease. Even its incorporation in primary law seems to be a fig leaf hiding the deficiencies regarding its implementation and enforceability (Calliess 2011a, b).

3.3 The Charter of Fundamental Rights

Article 37 CFR has the heading “Environmental Protection” and the following wording:

“A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development”.

According to the prevailing interpretation, Article 37 CFR does not grant a right to a high level of environmental protection (Calliess 2003). Such an interpretation would mean that Article 37 CFR is simply a repetition of the content of the TFEU/TEU rules. But it begs the question, why the provision was placed precisely in the Charter of Fundamental Rights if there is no intention to improve the legal position of individuals? But even if it is just a programmatic objective at EU level it has—if taken seriously—normative effect (Kerschner 1996).

3.4 The Article 191 Treaty on the Functioning of the European Union

Article 191(1) TFEU determines, in an exhaustive manner, the goals of EU environmental policy: protection of environment and human health, ensuring efficient use of resources and promoting international action to deal with regional or worldwide environmental problems, with special emphasis on the climate. All these elements relate to the principle of sustainability in one way or another; they are of highest importance for the establishment of a sustainable framework of action. Prerequisite is, however, that they are taken seriously.

In summary, the principle of sustainable development on primary law level has to be understood as an objective and interpretation principle of the Union (Epiney and Scheyli 1999); furthermore, it ensures that promotion of development and growth does not take place without considering environmental aspects.

4 Selected Areas of Law with Sustainability Dimension

4.1 Climate Protection

Climate protection is deemed to be one of the main challenges in sustainable development.

The Kyoto Protocol gives the possibility for the implementation of emissions trading schemes by which compliance with the obligations to reduce emissions should be facilitated. For the implementation of the Kyoto Protocol, the Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading was issued.¹ Currently, the Union aims also to conclude an international agreement to reduce greenhouse gas emissions from aviation, in order to achieve a globally coordinated action towards the air transport industry.²

According to the prevailing view, the greenhouse gas allowance trading in this form has unfortunately proven to be ineffective (Fütterer and Pichl 2010). More than ever the question occurs, whether it is possible to solve environmental problems on the free market. Moreover, companies can even make handsome profit from allowance trading. National expenditure for the free allowances issued in the

¹Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, OJ L 275, 25.10.2003, pp. 32–46.

²Regulation (EU) No 421/2014 of the European Parliament and of the Council of 16 April 2014 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in view of the implementation by 2020 of an international agreement applying a single global market-based measure to international aviation emissions, OJ L 129, 30.4.2014, pp. 1–4.

first trading period was immediately transferred to the consumers, which had an enormous increase in electricity prices for consumers as consequence—windfall profits (Fütterer and Pichl 2010). To ensure an effective application of this market-based instrument, the start-up difficulties have to be overcome; essential is, in the authors' opinion, that the “carbon leakage” list is eliminated.

To address the problems in climate change policy, the Commission has published several documents. In 2009, the White Paper “Adapting to climate change: Towards a European framework for action” was released (EC 2009); it deals with strategies to diminish the impacts of climate change. In 2013, a Green Paper providing a 2030 framework for climate and energy policies was issued (EC 2013a), which shows, on the one hand, the achievements already made and, on the other hand, future improvements that need to be achieved (Madner and Hartlieb 2013). On 22nd January 2014, the Commission established the framework for the future European energy and climate policy for the period from 2020 to 2030 (EC 2014a). By 2030, the greenhouse gas emissions shall be reduced by 40 % compared to 1990 levels. For this purpose the Directive on the revision of the EU Emissions Trading Scheme was adopted, which aimed on an improvement and standardization of the scheme as well as on a massive change in the allocation of allowances (Madner and Isepp 2014). Also renewable energies should be expanded and energy efficiency should support the reaching of the aims, which are defined in the framework for the future European energy and climate policy (EC 2014a).

In Austria the Climate-Protection Act, which entered into force on 22nd November 2011, was adopted on a national level.³ Even the negotiations between representatives of government and opposition parties were a difficult task and took three and a half years to be completed. The result was immensely criticized. The Climate-Protection Act is not an ordinary environmental protection act and the novelty of its content is questionable. It does not oblige any third parties, provide funding or shift competences; it does not define specific protection targets: the status quo is maintained (Schwarzer 2012). Therefore, the Austrian Climate-Protection Act is a pure planning tool. Reduction targets for each Member State (that are to be achieved by 2020) are set by the so-called Effort-Sharing Decision.⁴ Sectors affected by this decision are waste management, energy and industry (if they are not included in emissions trading), fluorinated gases, building, agriculture and transport. These are sectors that have not already been subjected to the greenhouse gas emission trading.

The reduction commitments for the period 2013–2020 are allocated between the federal state and the nine states of Austria according to an agreement that is concluded by the federal state and the state governments pursuant to Article 15a of the

³The “Klimaschutzgesetz” published in the federal law gazette (“BGBl”) I number 106/2011, in the currently valid version.

⁴Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020, OJ L 140, 5.6.2009, pp. 136–148.

Federal Constitutional Law⁵ (the Bundes-Verfassungsgesetz, B-VG). A national climate change committee has been established as a coordination hub between federal and state governments (Granner and Raschauer 2012). For each area of climate protection suitable measures shall be negotiated by representatives from the Ministry of Agroecology, Forestry, Environment and Water Management, the Ministry of Finance, the Federal Chancellery, the Ministry of Justice, Ministry of Science, Research and Economy, Federal Ministry of Family and Youth, Ministry of Labour, Social Affairs and Consumer Protection, and for particular organization such as the Chamber of Commerce and the Chamber for Labour.

4.2 Energy

In 2006, the Commission issued the “Green Paper—a European Strategy for Sustainable, Competitive and Secure Energy” (EC 2006). With this Green Paper, the Union wanted to take the first step towards a sustainable, competitive and secure European energy policy. When implementing the three dimensions of sustainability, the EU faces great challenges like the increasing dependency on imports, climate change and the increasing energy demand in Europe. In order to overcome these obstacles, the Commission asked the Member States to adjust their action according to three main objectives:

- Sustainability
- Competitiveness
- Security of supply

In 2013, the “Green Paper, A 2030 framework for climate and energy policies” followed (EC 2013b).

In general, there are two control mechanisms for sustainable and climate friendly development (Luger 2012):

- Reduced use of resources (resource policy) and
- Energy Policy (efficient energy use)

Following this approach, a number of secondary legislation has been enacted. Due to the high number of legislative acts, just a few examples of recent years shall be highlighted. Directive 2009/28/EC⁶ establishes a common framework for the promotion of energy from renewable energy sources and sets binding national targets for the share of renewable energy (for an overview see e.g. Rabl and Brenner

⁵The “Bundes-Verfassungsgesetz” (B-VG) published in the federal law gazette (“BGBl”) I number 1/1930, in the currently valid version.

⁶Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ L 140, 5.6.2009, pp. 16–62.

2009). Referring to the requirements of the Directive, Austria must achieve a share of 34 % of renewable energy sources in the energy mix. Furthermore, each Member State has to adopt an action plan for the promotion of renewable energy (Urbantschitsch and Hofer 2009). The aim is to reduce greenhouse gas emissions (further details see e.g. Piska 2010).

In 2014, the Commission released a Communication on energy efficiency in which an evaluation of developments in the field of energy efficiency is carried out (EC 2014a), and where it is assessed whether the energy efficiency targets for 2020 (increasing energy efficiency by 20 %) can be achieved. The Communication also includes a proposal for a new energy savings target for 2030 (increasing energy efficiency by 30 %). Thereby the Commission completed the climate and energy policy framework for 2020–2030 presented in January 2014 (Falke 2014a, b, c). The Council has already approved the binding aim of the European Union by the end of the year 2013.

Existing legislation that should ensure the achievement of the energy savings target in 2020 consist of (Falke 2014a, b, c):

- Energy Efficiency Directive (Directive 2012/27/EU)⁷;
- Directive on the Energy Performance of Buildings (Directive 2010/31/EU)⁸;
- Product regulations on the energy efficiency of buildings;
- Product rules establishing the minimum requirements for energy efficiency and the requirement to inform on labels on Energy Efficiency (Directive 2009/125/EC and Directive 2010/30/EU⁹, and its implementing rules);
- CO₂ emissions norms for cars and light commercial vehicles;
- An increased funding by the EU Structural and Investment Fund (Horizon 2020, ELENA and the European Energy Efficiency Fund);
- Electricity Market Directive (Directive 2009/72/EC)¹⁰;
- TEU Emission Trading Scheme.

In addition to the Building-Efficiency Directive mentioned second in the list above, the Commission presented a Communication on resource efficiency opportunities in the building sector in July 2014 (EC 2014b). The aim is to reduce

⁷Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC Text with EEA relevance, OJ L 315, 14.11.2012, pp. 1–56.

⁸Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings, OJ L 153, 18.6.2010, pp. 13–35.

⁹Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products, OJ L 285, 31.10.2009, pp. 10–35 and Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products, OJ L 153, 18.6.2010, pp. 1–12.

¹⁰Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, OJ L 211, 14.8.2009, pp. 55–93.

environmental impact of new and refurbished buildings by increasing resource efficiency and improving the information available on the environmental performance of buildings. In addition, the Commission intends to create a regulatory framework with a limited number of core indicators to assess the environmental impact of buildings (Falke 2014a, b, c).

In Austria, the Green Electricity Act 2012¹¹ is an important pillar of the national climate, energy efficiency and environmental activities. The Act of 2012 amended the old—due to numerous amendments hard to read—Green Electricity Act; all provisions concerning the promotion of electricity from renewable energy sources were transferred into a separate law (Rihs 2012). From the synopsis of binding and non-binding EU measures in energy policy and from the fact that fossil fuels will be on one point scarce it can be deduced that a move to renewable energy source is indispensable to ensure economic development. Closely connected to this is the goal to maintain ecological capacity (among others to combat climate change) and idea of generational justice. A shift to renewable energy sources comes with many difficulties (funding policy, no cost transparency, misled subsidization strategies etc.). The transition to a renewable energy system is essential for the European Sustainability Strategy and its dimensions. But it is doubtful whether the actions taken in this regard have enough dynamics. There is still some strong opposition from those who gain profit by exploiting fossil energy (Christian et al. 2015).

Not only that the transition to renewable energy sources is counteracted thereby, in fact several debatable methods are used to exploit fossil resources (such as high-volume hydraulic fracturing to exploit shale gas or shale oil) or to “hide” the CO₂ in geological formations (Carbon Capture and Storage technology, CCS). The “Energiewende” (energy turnaround) is, in any event, a logical requirement of the objective of sustainability.

Thus, the failure of the EU climate change policy is a failure of the sustainability strategy; the climatic deterioration shows that the above-mentioned objectives of sustainability were not implemented adequately.

4.3 Waste Management

The field of waste management is one of the oldest and most regulated fields of European environmental law. Currently, the Commission is paying increased attention to plastic in a Green Paper dealing with a European strategy on plastic waste in the environment (EC 2013b). The European waste law contains no specific rules for this kind of waste. The Green Paper (EC 2013b) intended to start a public debate on the sustainable design of plastic products and the use of plastic waste. In addition, the Commission developed in the same year an interim report on the implementation

¹¹The “Ökostromgesetz” published in the federal law gazette (“BGBl”) I number 75/2011, in the currently valid version.

of the European waste management legislation adopted in the years 2007 till 2009. In conclusion, it can be said that the transposition into national law largely went without a hitch; however there are significant problems in the implementation and enforcement of some Directives. The Commission is especially concerned about the Waste Framework Directive¹² and the Landfill Directive.¹³ In the Landfill Directive, there are a number of gaps as regards the fulfilment of requirements and in the Waste Framework Directive there are considerable difficulties in the implementation of the requirements for certain landfills (Falke 2013a, b).

The Austrian Waste Management Act (Abfallwirtschaftsgesetz, AWG) 2002¹⁴ regulates the waste prevention; preparation for re-use of waste; recycling, duties of persons who are concerned with waste management; and requirements for waste treatment plants. The AWG explicitly refers to the precautionary principle and the principle of sustainability. Waste prevention should be an important guiding principle. § 1(3) cipher 3 AWG states that material has to be collected, stored, transported and treated as “waste” if the sustainable use of water or land may be affected. § 9 AWG defines the goals of sustainable waste prevention. The demonstratively mentioned measures deemed to achieve these goals are put into perspective by reference to the criterion of economic viability.

It can be concluded that as long as the discussion centres around refraining from plastic bags, there will be no real improvements for plastic-contaminated oceans, mountains of garbage etc. The principle of waste prevention is largely on paper.

4.4 *Industry*

Economic activities often collide with environmental interests. Therefore, the EU has adopted various acts to prevent environmental damage and ensure sustainable development. They are intended to set limits and standards for the industry and thereby mitigate the exploitation and continuous destruction of the environment.

The Directive on Industrial Emissions requires an approval for certain industrial and agricultural activities with a high pollution potential. The authorization is linked to certain environmental requirements. The IPPC Directive intends to implement the preventive and precautionary principle as well as the polluter-pays principle in the industrial sector.

¹²Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives, OJ L 312, 22.11.2008, pp. 3–30.

¹³Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste OJ L 182, 16.7.1999, pp. 1–19.

¹⁴The “Bundesgesetz über eine nachhaltige Abfallwirtschaft” published in the federal law gazette (“BGBl”) I number 102/2001, in the currently valid version.

In 2012, the revised version of the “Seveso II-Directive”¹⁵, named according a place of an major industrial accident, entered into force. The Seveso III Directive¹⁶ incorporates new developments in international and European chemical classification law. The amendments concern, inter alia, easy access to information about the dangers of nearby industrial plants and rules of conduct in case of an accident, the improvement of the participation of the public concerned in planning projects, access to justice for the citizens to whom no such right has previously been granted, and stricter standards for the planning of new establishments (Falke 2012).

In 2014, the Commission published a “Green Action Plan for SMEs” (EC 2014c) in order to support small and medium-sized enterprises and to show them—in application of the Smart Business Act (EC 2008)—how to make use of the business opportunities a fight against environmental problems offers them. An increased use of circuit models and green technology could be highly profitable for the companies. The SME Action Plan aims to increase resource efficiency, to promote environmentally friendly business practices, to open new business opportunities and to facilitate market access for eco-friendly SMEs (Falke 2014a, b, c).

4.5 Traffic

The traffic sector is still a stepchild in the implementation of the sustainability debate (Kerschner 2001). It is a much-debated topic, but finally hardly anybody is willing to give up the convenience of motorized transportation. Moreover, the public transport systems are usually not covering all areas; especially in rural areas people are often dependent on individual transport. There is definitely no lack of awareness regarding this problem; nevertheless, there are barely any sustainable solutions in this field (Tichler et al. 2011); it seems that the car is the “holy cow” of Europe.

At an international level, the Convention for the Protection of the Alps (short the “Alpine Convention”) was concluded among several European entities (including Austria and the predecessor of the EU at November 07, 1991) and entered into force in March 06, 1995.¹⁷ The Alpine Convention is a framework agreement that aims to facilitate sustainable development in the Alpine region. On this basis, the Traffic-Protocol of the Alpine Convention was adopted. In the interest of

¹⁵Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances, OJ L 10, 14.1.1997, pp. 13–33.

¹⁶Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC, OJ L 197, 24.7.2012, pp. 1–37.

¹⁷Retrieved May 22, 2015 from <http://www.alpconv.org/en/convention/framework/default.html> and see also the “Alpenkonvention”, published in the federal law gazette (“BGBl”) III number 477/1995, in the currently valid version.

sustainability, the Parties are obliged to implement an efficient and safe flow of traffic in a cross-border traffic network, which has to comply with certain requirements (Mauerhofer 2004b).

Also at a European level, there are efforts to curtail the problem areas of traffic by various measures. The Directive on the promotion of clean and energy-efficient road transport vehicles¹⁸ (Directive 2009/33/EC) was enacted in order to improve energy efficiency and to reduce pollutant emissions caused by road traffic. Regulation No. 510/2011¹⁹ of the EU tries to tackle the problem at the source, at the point of formation of the emission; collective emission norms according to new light commercial vehicles are defined in order to reduce their CO₂ emissions. In 2011, the Commission summarized the most urgent tasks, objectives and measures referring to traffic problems in the White Paper called “Roadmap to a Single European Transport Area—Towards a competitive and resource efficient transport system” (EC 2011).

In particular the use of alternative fuels is considered to be a possible way to reduce the transport sector’s pressure on the climate. The EU program “Horizon 2020”, which was established by Regulation No. 1291/2013²⁰, intended, among other things, to promote research on alternative fuels for vehicles (such as electricity, hydrogen or natural gas). Minimum requirements for the construction of infrastructure necessary to provide the vehicles with the alternative fuels are given by Directive 2014/94/EU.²¹ In fall of 2012, the Commission submitted a proposal with the aim to limit the use of land for the purpose of biofuels production to an acceptable degree (EC 2012a). Moreover, the impact of European biofuels on the climate should be improved. This was in reaction to the vehement criticism on the production of biofuels, i.e. the use of food crops for biofuel production and thereby caused rise in price of basic food (Falke 2013a, b).

In May 2014, a strategy to reduce CO₂ emissions of trucks and buses was developed by the Commission (EC 2014d) with the purpose to supplement the legislation on passenger cars and light commercial vehicles. Anyhow, approximately a quarter of the emissions caused by road traffic are produced by heavy commercial vehicles. The current strategy still does not establish effective measures to avoid or reduce emissions. A first step to change this is the implementation of certification, notification and monitoring of pollution causing heavy commercial vehicles (Falke 2014a, b, c).

¹⁸Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles, OJ L 120, 15.5.2009, pp. 5–12.

¹⁹Regulation (EU) No 510/2011 of the European Parliament and of the Council of 11 May 2011 setting emission performance standards for new light commercial vehicles as part of the Union’s integrated approach to reduce CO₂ emissions from light-duty vehicles, OJ L 145, 31.5.2011, pp. 1–18.

²⁰Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020—the Framework Programme for Research and Innovation (2014–2020) and repealing Decision No 1982/2006/EC, OJ L 347, 20.12.2013, pp. 104–173.

²¹Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure, OJ L 307, 28.10.2014, pp. 1–20.

Considering its current development, European transport policy will only comply with the aim of sustainability if, on the one hand, a change to alternative driving systems is implemented and, on the other hand, the mobility behaviour of Europeans changes drastically. The tendency to travel bigger distances within shorter time periods—in particular with airplane—needs to experience a trend reversal. The development of a European high-speed rail network, which has already been improved in the last years, seems to be a step in the right direction. Moreover, the EU traffic policy acknowledges that rural areas need to be better connected in many Member States.

The state of air quality in Europe is closely related to the topic of traffic. In order to achieve the objectives for 2020 as set out in the relevant legislation, the Commission adopted a new strategy “Clean Air for Europe” (EC 2013c). Its goal is to ensure compliance with the legislation and that the full potential of existing measures is used; furthermore, health effects of air pollution shall be reduced by a third. The following measures should contribute to these purposes (Falke 2014a, b, c):

- Proposal for a revision of Directive 2003/35/EC on National Emission maximum amount (EC 2013d);
- Proposal for a reduction of emissions of certain air pollutants by medium-sized combustion plants (EC 2013e);
- Ratification of Gothenburg Protocol 2012 and the
- Reduction of ammonia-emissions from agriculture.

Air pollutants have a negative effect on human health. This is indeed essential for the concept of sustainable development: Damage to health caused by environmental toxins raises the macroeconomic costs and can consequently impair economic development. Making environmental standards—in particular those related to human health—enforceable for individuals, seems to be the most suitable way to realize the current sustainability strategy. It certainly requires a widespread application in Europe. Similar considerations arise with respect to toxic food constituents and hazardous substances in products. In this regard, more and more is revealed. Many of the toxins contained in products are suspected to involve a residual risk of impairing the reproductive capacity or the progeny.

4.6 Nature Protection and Biodiversity

In 2010, the Commission confirmed in its report on the implementation of the Action Plan for the conservation of biological diversity that the targets were missed and the loss of biodiversity could not be stopped (EC 2010b). Pollution, invasive species and climate change still threaten biodiversity. A new target regarding halting the loss of biodiversity was set by the Commission for the year 2020 (EC 2010c).

In October 2014, the Regulation of the European Parliament and of the Council on the prevention and management of the introduction and spread of invasive alien species²² was enacted. Invasive alien species have a massive negative impact on biodiversity; their spread causes adverse changes in the domestic ecosystem and affects native species seriously. Furthermore, it is to be feared that they pose a risk to human health as well. The Regulation aims to prevent, control and eliminate the spread of invasive alien species. In order to do so, it obliges to release a list by beginning of 2016 latest that contains all the dangerous species that may not be imported into the EU, acquired, used, released or sold.

Protection of various ecosystems is still a concern of the Union. Specifically, the EU became active now regarding the habitat “forest”. Forests serve economic, social and environmental aspects; so their population has an impact on all dimensions of sustainability. Healthy and functioning forests reduce CO₂ in the atmosphere and contribute in this way to climate protection. Moreover, they serve as habitat for many animal and plant species. In 2013, the Commission has developed a new EU Forestry Strategy in order to implement sustainable forest management. On this basis, Member States have to compile national action plans and supporting programs (EC 2013f).

The Environmental Impact Assessment Directive²³ states an obligation to assess the environmental impacts of certain projects before the competent authorities may approve them. If the result of the impact assessment is unsatisfactory, the approval will be refused or, if possible, only granted under certain conditions. In 2013, the Commission has issued detailed guidelines on the application of the EIA.

In April 2014, the EIA Directive was amended in some areas by the Directive 2014/52/EU²⁴ (see also EC 2012b) in order to contribute to achieve the goal of a “resource-efficient Europe”. In summary the most important changes are (Falke 2014a, b, c):

- Obligation for Member States to simplify the EIA process;
- Introduction of deadlines for the various phases of environmental assessments with the obligation to ensure a timely handling of the case;
- Simplification of the screening procedure;
- Quality and content of the EIA reports should be improved;
- Reports shall be written in a comprehensible way;

²²Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species, OJ L 317, 4.11.2014, pp. 35–55.

²³Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, OJ L 26, 28.1.2012, pp. 1–21.

²⁴Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment Text with EEA relevance, OJ L 124, 25.4.2014, pp. 1–18.

- Authorities shall demonstrate their objectivity;
- Reasons for a decision of approval shall be disclosed in a transparent and clear way; and
- Projects with significant adverse effects shall be observed as part of the mitigation, prevention and reduction activities (Falke 2014a, b, c).

The Environmental Liability Directive (ELD)²⁵ on environmental liability with regard to the prevention and remedying of environmental damage establishes a framework for a uniform system of liability for environmental damages. In application of the polluter-pays principle, the person who causes a risk of damage or damage should bear the costs of preventive and remediation measures, respectively. If the perpetrator cannot be held liable for the damages on environmental media or the threat thereof, Member States and the general public can bear the costs in order to avoid that the damage is not remedied at all and an impaired environment is left over (Hinteregger and Kerschner 2011).

5 Conclusion

Sustainability cannot be solely achieved by strategies, programs, plans, long-term goals etc. The legislature has to choose more effective ways in order to ensure that actions are actually implemented in reality. The path to a sustainable economy will be a steep and stony one. It requires common efforts of the whole society. At the moment, we are at the beginning of the path; there is still some temptation to decelerate or even turn back. We have to be aware that any revision of the idea of sustainability would be to the disadvantage of future generations. Are we really that selfish?

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²⁵Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, OJ L 143, 30.4.2004, pp. 56–75.

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