Unit V 25: Sustainable economy

1. Summary

The goal of the national economy and thus of economic production should be to satisfy the basic needs of all people in an environmentally friendly and socially acceptable manner. However, a resource-efficient economy can only be created if the state sets appropriate incentives. First and foremost, the so-called external costs must be included in the price calculation and compensated directly or indirectly via the price, primarily by the direct consumers and secondarily by the general public. Possibilities for this are environmental taxes or incentive taxes. A special approach to sustainable economics is corporate social responsibility.

2. Sustainable economics

Economist and longtime advocate of capitalism Lawrence Summers, Secretary of the Treasury under Bill Clinton 1999 - 2001 and direct of the National Economic Council NEC under Barak Obama 2009 - 2010 - pointed out on November 9, 2013, to the astonishment of many economists, that the U.S. economy has fallen well short of its potential in recent years. He based his assessment on four indicators: first, the "inflation-adjusted" interest rate has been falling for more than 30 years, which means that the return on investment is also declining. Second, labor productivity has been declining for 13 years. Third, domestic demand has been declining since the 1980s. And fourth, there has been stagnation or regression in productive investment and gross fixed capital formation since 2001 (see Vergopoulos in Le Monde Diplomatique, March 2014:3). Therefore - according to Summers - companies no longer invested in expanding production and no longer focused on profit maximization, but retained ever larger parts of the value added. The (capitalist) economic system was thus in a dilemma: The middle classes were being weakened by growing social inequality, and mass unemployment was reducing purchasing power, which further reduced the potential profits of companies (see Vergopoulos in Le Monde Diplomatique, March 2014:3) - in other words, a scenario familiar from deflationary cycles. Accordingly, the changing financial bubbles could also be seen against this background (see also ► Unit V 18:

"Financial bubbles and overproduction crises") - and as a desperate attempt to find new investment fields and return opportunities.

Thus - according to Summers - "the angelic circle of growth" has been broken (see Vergopoulos in Le Monde Diplomatique, March 2014:3). So has growth reached its limits? This impression is reinforced by the fact that many large companies are now hoarding cash and holding liquidity. For example, U.S. companies outside the financial sector had US$2800 billion in liquidity at the beginning of 2014 (see Vergopoulos in Le Monde Diplomatique of March 2014:3). Commenting on this, journalist James Saft said, "Companies apparently prefer to hoard their cash or use it for share buybacks than to use it to build new productive capacity" (quoted by Vergopoulos in Le Monde Diplomatique of March 2014:3). The only question that arises is whether this is an expression of a temporary growth crisis or points to an end of economic growth itself.

The economic discussion on sustainability has gone through **several phases**: 1) In the 1970s, **neoclassical environmental economics** was developed, which saw the misallocation (= inefficient use or overuse) of natural resources as the cause of human destruction of the environment (cf. Rogall 2015:147). In doing so, neoclassical environmental economics distinguished socio-economic factors and systemic factors for the overuse of natural resources:

First: Socio-economic factors	
1	The *externalization* (passing on) of environmental costs to third parties (e.g. future generations).
2	The erroneous treatment of natural resources as public goods (called *the public goods problem*), even though natural resources are precisely not inexhaustible (the problem of overuse in the case of free beer)
3	*Discounting of costs* and benefits of the future into the present, so that they appear insignificant in the present and rarely trigger compensatory measures (provision for life risks, climate consequences)
4	*Prisoner's dilemma* (foregoing alone is not rational)
5	*Free rider syndrome* (the others should pay)
Second: Developmental and systemic factors	
1	Population growth
2	Economic growth and consumption patterns
3	Profit maximization and capital accumulation
4	Technical maldevelopment due to state or policy failure
5	Poverty-related environmental pressures (especially in developing countries)

Quelle: Rogall 2015:147.

Among the criticisms levelled against neoclassical environmental economics were its weak sustainability, the inaccurate calculation of environmental costs, the lack of ethical reflection, the economistic view of humanity, and the absolutization of consumer sovereignty (cf. Rogall 2015:150).

Therefore, according to Rogall (2015:154), neoclassical environmental economics "can only conditionally be called part of Sustainable Science."

2) **Ecological Economics** emerged in the 1980s and 3) **New Environmental Economics** emerged in the 1990s (cf. Rogall 2015:154). Later, this gave rise to 4) concepts of **Sustainable Economics**. "Sustainable economics aims to apply the findings of sustainability research to economics. Thus, the ethical principles and premises of sustainable development also apply to business" (Rogall 2015:155). The following definition describes how sustainable economics is understood in this context:

Definitions of Sustainable Economics: Sustainable Economics derives the following definition of sustainable economics from the ethical principles of sustainable development:
"Sustainable economics aims to achieve sufficiently high ecological, economic and social-cultural standards for all people living today and for future generations within the limits of the earth's natural carrying capacity, thus enforcing the intra- and intergenerational principle of justice" ...
The EU's 7th Environment Program puts this goal in a nutshell as "in 2050 we live well within the ecological carrying capacity limits of our planet" (EU 2013). The definition of sustainable economics stems from the recognition of intra- and intergenerational equity.
Intragenerational justice ... means the pursuit of equal life chances and adequate minimum socio-ecological standards for all people living today. This topic is located in a border area between the economic and the social-cultural goals of a sustainable economic policy. According to the **intergenerational justice principle**, each generation must be able to decide which goods it produces, in what way, and how they are distributed fairly. Climate change, the destruction of the ozone layer, the poisoning of soils, extinct species, and exploited sources of raw materials and energy **unduly restrict this freedom to decide**, since they cannot be reversed in a timely manner. The natural foundations of life are **a necessary condition for life**, therefore their endangerment is unacceptable.
Source: Rogall 2015:156.

The fundamental question that arises is whether a capitalist economic system can function at all without growth.

Ulrike Herrmann (in Le Monde Diplomatique, April 2015:3) is very skeptical in this regard: "If growth were prevented, capitalism would be ended, but the result would not be the ecological circular economy that environmentalists hope for. It would be an economy in free fall, creating panic. People are deeply shaken when they lose their jobs and their income. All great economic crises have been immensely dangerous - even to democracy." But wouldn't it be conceivable to try to extend the capitalist economic system to spaces outside the earth - and at the same time protect the earth's natural resources? Exponential growth - such as in the mining of raw materials on other planets or on comets that are not inhabited - could be used to finance a zero-growth economy on Earth. In principle, certain places or areas could be withdrawn from economic growth, while others might well lend themselves to a growth economy. Basically, what Herrmann (in Le Monde Diplomatique of April 2015:3) writes is probably true: "It is a dilemma: without growth there is no such thing as completely green growth, and normal growth inevitably leads to ecological disaster."

Therefore, on our planet, the market economy and thus economic production should be based on the following three criteria:

Only products - and services! - should be produced

a) which serve the sustainable satisfaction of basic needs (e.g. healthy food, renewable energy, education, environmentally compatible information use and communication);
b) which are produced from renewable and environmentally friendly raw materials (e.g. wood; renewable energy);
c) whose production, use or consumption, as well as their disposal, do not cause environmental or health damage (such as noise, water pollution, air pollution, non-degradable solid waste, poisoned food, electrosmog, radioactively contaminated waste).

The German Council for Sustainable Development (2015) has paraphrased sustainability as follows: "Sustainable development means taking environmental aspects into account on an equal footing with social and economic aspects. In other words, sustainable development means that we must leave our children and grandchildren an intact ecological, social and economic fabric. One cannot be had without the other" (quoted from Müller 2015:1).

In this context, the three pillars of sustainability are usually understood to be the economy, the ecology and the social dimension (cf. Müller 2015:6/7). The problem here is that there is hardly ever an equivalence of ecological or economic interests, let alone one that can be enforced - either the economic or the ecological side will always dominate. Friedrich M. Zimmermann (2016:19) was one of the few authors to point out that these three aspects are not equally weighted, but "that for our further (survival) life, nature clearly has to stand as the original source of value creation."

According to Michael Müller (2009:13), sustainability is first and foremost "time policy" from the perspective of the general public and the common good. This means that "what we do today would, according to our current knowledge, be justifiable in the same way in 50 or 100 years" (Müller 2009:13). Two aspects are in the foreground here:

"- On the one hand, we must actively transform the basis of the national economy and organize industrial value creation via sustainable production that is both more efficient and more sparing with resources and energy and with the possibilities of the natural balance. Finite raw materials must be replaced by renewable ones. To this end, the great potential for savings in the use of raw materials must be exploited. From an energy point of view, for example, the current consumption shows losses of up to 90%. The promotion of renewable energies has become a success story, used by 66 countries, 48 of which follow the German model.

- On the other hand, the scarcity problem and the continuing environmental degradation create an immense market for resource and energy efficient products and processes, as well as for integrated and systematic solutions. To this end, the state must rely on effective stimuli and create framework conditions so that economic actors take the most important future requirements into account in their decisions" (Müller 2009:13).

In this context, marginal economic costs speak in favor of permanently avoiding high material and energy inputs and often associated consequential costs. Decentralized solutions in small and medium-sized enterprises generally offer greater savings potential than centralized forms of production with correspondingly high transport costs. If, for example, electricity is produced decentrally at the consumers' premises - e.g. by photovoltaic solar panels - and the surplus electricity is fed into the power grid on site, the horrendous transport costs are eliminated. Today - as every private electricity consumer can see for himself from his electricity bills - the costs for grid usage in Switzerland are already significantly higher than the effective delivery costs of electric power.

Despite the long-term shortage of important energy sources and the rise in commodity prices since the financial crisis of 2008 to 2011, consumers are surprisingly indifferent to the rise in electricity prices. A study commissioned by Economiesuisse from the Swiss Institute for Business Cycle Research (KOF) at the Swiss Federal Institute of Technology Zurich showed that the price elasticity of electricity was extremely low in 2011. The short-term price elasticity, i.e. within one year, was only just 0.2%. This means that a 10% increase in

electricity prices only triggered a 2% drop in demand. Surprisingly, this was true for both residential consumers and businesses. For periods of ten years or more, the price elasticity rose to 0.6% for residential users, and even to 0.6 to 1% for industrial users (Müller in Neue Zürcher Zeitung, May 24, 2011:23). This rather low and only slightly increasing price elasticity in the longer term is mainly explained by facts: On the one hand, the dependence on electricity is very high, electricity cannot be substituted - at least at the end consumer - by other forms of energy, or only with difficulty. On the other hand, electricity-consuming appliances are used for a longer period of time, i.e. concrete electricity-saving opportunities only arise again when a new appliance is purchased, such as a dishwasher, a washing machine, a television or a computer. The study concludes - apparently not entirely without political intent - that if all five nuclear power plants in Switzerland were to be shut down, the price of electricity would have to rise by two-thirds to make up for the 40% of electricity production that would be lost (Müller in Neue Zürcher Zeitung, 24.5.2011:23). However, it is forgotten that nuclear power can also be substituted by other electricity sources.

The whole thing is further complicated by the so-called "rebound effect", which expresses the fact that consumers often react to greater efficiency in production and to innovative offers with an increase in consumption. For example, greater fuel efficiency of vehicles led to an increase in traffic speed and ultimately traffic density (see Binswanger in Die Volkswirtschaft 5-2012:26). Another example of the rebound effect is the increase in square meterage required for housing that occurred simultaneously with better house insulation (cf. Binswanger in Die Volkswirtschaft 5-2012:26). According to Binswanger (in Die Volkswirtschaft 5-2012:26), this rebound effect could be compensated by a change in the framework conditions - for example, through special or higher taxation.

However, Edgar L. Gärtner (in Neue Zürcher Zeitung of 23.8.2012) pointed out, not entirely without reason, that too strong ecological regulatory requirements can tip over into state dirigisme or even into a planned economy. Somewhat polemically, the author pointed out that overly strong sustainability regulations in the economy could lead to a "warmed-over Malthusianism." The British economist Thomas Robert Malthus (1766-1834) put forward the thesis that food production can only grow linearly, while the population often increases exponentially, which is why famine is inevitable. He therefore advocated strict population

control. As a result, well-known economists - such as John Maynard Keynes or the Swedish development economist couple Alva and Gunnar Myrdal - and philosophers - such as John Rawls - also advocated eugenic positions, i.e. approaches to avoid life unworthy of life through abortion, sterilization (as in Sweden) or even worse methods. For example, Keynes presided over the British Society for Eugenics until shortly before his death (see Gärtner in Neue Zürcher Zeitung, Aug. 23, 2012). Fortunately, Malthusian predictions have come true only in exceptional cases - mostly, technical and economic innovations in agriculture and the food industry have been strong enough to compensate for population growth. But the gap between massively growing human demand and limited capacity of our nature still exists, not only in terms of food production, but in the whole economy.

Basically, the following question arises: How could it come to the point that our economic activity increasingly endangers our ecosystems, which are at the same time the prerequisite and basis of our life and thus also of our economic system? A central explanation lies in the fact that consumption and production incur costs that are not borne by the polluters. When lousily maintained oil tankers sink and pollute millions of liters of water, or when CO2 emissions change the global climate, the resulting damage is paid neither by the polluters on the production side nor by the consumers who consume the corresponding products. These costs are passed on to outsiders - for example, the residents of polluted coasts or areas affected by drought or flooding as a result of climate change. In economic terms, this is referred to as external costs. External costs are not only the consequences of accidents, but they can also arise as a normal consequence of economic activities, e.g. from the exhaust fumes of normally operating passenger planes in the air. When external costs occur, the market mechanism fails: "Too much of these goods is produced and consumed because they are produced and sold too 'cheaply' in terms of total costs (business and external costs)" (Eisenhut 2006:130). Market participants waste the valuable environment because it consists largely of free goods and partly of public goods and is available to everyone. Therefore, the environment is used and overused by everyone.

From an economic point of view - according to Eisenhut 2006:130 - the following demands can be made for sustainable development:

1) Renewable resources: Self-renewing resources - such as forests, agricultural land or fish stocks in water bodies - need sufficient time to renew themselves. Therefore, the rate of use should be defined so that it does not exceed the rate of regeneration.
2) Absorption capacity of ecosystems: The return of solid or liquid waste to nature, as well as pollution of the air, must be kept low enough so that the rate of pollution does not exceed the absorption capacity of the environment.
3) Ecological risks: New technological risks must not endanger the stability of ecological systems. Major risks whose effects violate sustainability postulates or cannot be estimated must be avoided.
4) Non-renewable resources: The exploitation of non-renewable resources is at the expense of future generations. The use of non-renewable resources is acceptable only to the extent that a decrease in consumption can be realized by increasing resource productivity and substitution.
5) Maintaining the health of biosystems and preserving biodiversity: Environmental degradation is often associated with the loss of plants and animals, and thus with a loss of biodiversity. Maintaining biosystems and biodiversity are prerequisites for a sustainable economy.

Hans Wielens (2004:51) has rightly pointed out that the real scarcity factors are neither labor, capital, nor raw materials, but prudence, prudence, and wisdom. Economic changes should be thought through and approached with calm and composure.

This is also supported by the so-called Easterlin paradox (cf. Schwöb et al. in Neue Zürcher Zeitung, 18.2.2015:29): This paradox, which can be traced back to the American economist, states that, on the one hand, people's satisfaction increases as their income grows. But the increase in satisfaction decreases with each additional income - of say Fr. or € 100.- each. However, when GDP increases and everyone's income increases, people are no happier than before - so what is true for individuals is not true for populations as a whole. This means that economic growth per se does not yet lead to greater happiness, quite apart from the fact that the increase in happiness with increased income is most noticeable among people with very low incomes.

Another question is the impact of climate change and related environmental problems on the economy at the national and global level. It is well known that the number of environmental refugees has increased in recent years and will continue to rise in the future (see ► Unit I 30: "Migration"). The extent to which individual countries are prepared for the consequences of climate risks is also of economic significance.

2.1 Corporate sustainability

Frank Figge, Tobias Hahn, and Lydia Illge (in Le Monde Diplomatique, February 2010:5) criticized common corporate practices for using a series of legal tricks to make themselves appear "greener" than they really are. For example, today a "green" oil company can score better than a wind power company: Sustainability ratings are based on long lists of criteria, only a few of which relate to the actual impact of the company's activities on the environment and society. For example, how the company communicates is rated higher than the factual impact on climate change. How a company reports on its environmental and social activities is rated higher than its resource use. Instead of evaluating sustainability performance as a whole, individual process or product improvements are often reported in anecdotal form. Using perfectly legal tricks, corporations can make entire power plants and thus enormous amounts of CO2 emissions disappear from their balance sheets.

The authors also criticize that "the return on ecological and social resources ... is often confused with a higher return on investment through good environmental or social management. However, a higher return on investment is not the same as a higher - ecological - return on investment. Conversely, a company that achieves a below-average market return on its capital may at the same time be very efficient with its ecological resources. However, it will still be punished by the financial markets because they completely disregard the ecological footprint and thus also the ecological return" (Figge/Hahn/Illge in Le Monde Diplomatique, February 2010:5).

But there are also constructive approaches to sustainable corporate governance. Norbert Bernholt (in Humane Wirtschaft Sept./Oct. 2012:19) argues for a sustainable corporate constitution that should include three starting points: first, participation; second, steering

the company through a sustainability balance sheet; and third, a "neutralization" of the capital generated.

By participation, the author means the involvement of society as a whole in the production and distribution of goods and services, i.e., in the strategic decision-making processes of the company, i.e., a kind of greatly expanded stakeholder value approach at the strategic decision-making level.

Bernholt (in Humane Wirtschaft Sept./Oct. 2012:20) sees the decisive instrument for sustainable corporate management in the sustainability balance sheet, which is intended to give the entrepreneur systematic incentives for ecological and sustainable management. On the one hand, business success is to be decoupled from high profits, and on the other hand, externalized costs such as dealing with the natural environment, social compatibility, and social factors such as the welfare of employees and customers are to be included in the balance sheet and income statement. Bernholt (in Humane Wirtschaft Sept./Oct. 2012:20) suggests instead of the previous "one-dimensional income statement" - for example with the help of the balanced scorecard, which Bernholt (in Humane Wirtschaft Sept./Oct. 2012:20) accuses of one-sided orientation towards profit maximization - to use a sustainability balance sheet as a management tool. This sustainability balance sheet could look as follows:

Area/Perspective	Aims	Code number	Sustainability points		Planned measures
			Target (weighting factor)	Actual value	
Employees			200	100	
Ecology			200	100	
Customers			200	75	
Finances			200	75	
Suppliers			100	25	
Social environment			100	25	
Sum			1000	400	

Source: Bernholt in Humane Wirtschaft Sept./Okt. 2012:20.

The state could use the sustainability points to be awarded as a comparable parameter for taxing or subsidizing a company, or as an assessment criterion for evaluating bids in public tenders for contracts.

The third proposal is much more problematic, according to which earned capital - obviously profit is meant - is not credited to the capital providers or the company owners, but is to be entered in the company's balance sheet as neutral capital. This practice pursues the following goal: "Over time, this share will increase and thus continuously reduce the influence of the capital providers. At some point, the company will virtually own itself" (Bernholt in Humane Wirtschaft Sept./Oct. 2012:19). The table below shows how the author envisions this:

Balance in the year 1			
Fixed assets	70.000	Equity	50.000
Current assets	30.000	Debt capital	50.000
Total	100.000	Total	100.000

Balance in the year 2			
Fixed assets	80.000	Equity	50.000
Current assets	40.000	Generated capital	20.000
		Debt capital	50.000
Total	120.000	Total	120.000

Source: Bernholt in Humane Wirtschaft Sept./Okt. 2012:21.

Apart from the fact that this practice would greatly complicate and bureaucratize the clearance of accounts, it would create industrial or financial conglomerates that no one would be able to control - a state within the state, so to speak. The proposed tripartite co-determination - i.e., capital providers, employees and society - would not help either, because it would be very cumbersome, as the example of Germany shows. Such a solution would probably be the death knell for the free enterprise of small and medium-sized companies. Even if one assumes a lower limit of 500 employees - as proposed - because this number can be reached very quickly.

2.2 Corporate Social Responsibility

For some years now, so-called corporate social responsibility has been touted as a tool for a sustainable economy.

Mark Schieritz (2009:115) paraphrases the term Corporate Social Responsibility as follows: "The term Corporate Social Responsibility stands for a contribution of the economy to sustainable development that goes beyond the legal requirements. The EU Commission defines CSR as a 'concept that serves as a basis for companies to integrate social concerns and environmental issues into their operations and interactions with stakeholders on a voluntary basis'." Unlike economists such as Milton Friedman, who rejected any claim that companies should work toward goals other than maximizing their profits, the idea of corporate social responsibility assumes that companies should contribute to the sustainable development of all those countries in which they operate.

What does corporate social responsibility mean?
Corporate Social Responsibility (CSR) is a component of the sustainability discussion. It is a concept of corporate responsibility that takes up the idea of sustainability and combines the three pillars of economy, ecology and social issues with concrete corporate action. Accordingly, CSR encompasses a wide range of corporate activities in the fields of social, ethical and ecological responsibility, with which sustainable development is implemented in day-to-day business. CSR activities go beyond legal obligations, i.e. they are voluntary and the result of companies' own initiative and responsibility. ...
An essential prerequisite for successful sustainable development strategies is to assign clear areas of responsibility to the individual social actors. Through their CSR activities, companies can work toward social and ecological behavior within their sphere of influence, also in partnership with other social actors. Many companies in Germany have been facing up to this responsibility for a long time. However, companies cannot compensate for the failures of politics with their performance. The responsibility for ensuring compliance with social rights and environmental legislation, both at home and vis-à-vis partners, lies with politicians.
Source:
http://www.csrgermany.de/www/CSRcms.nsf/id/66DF9DF1BB26274DC1256F00002D8E4C

"As a general rule, companies in a market economy should maximize their profits. ... Nevertheless, ... [corporate social responsibility] is gaining in importance for many companies, including German SMEs. One important reason for this is that in an age of

increasingly close-knit global communications networks, companies must reckon with their behavior quickly becoming public knowledge. Even if their behavior complies with the law under respective legal systems, it can lead to damage to their brand and reputation that is difficult to repair and can ultimately impact profits. This is especially true in the extractive sector, which is closely watched by non-governmental organizations and the media" (Schieritz 2009:116).

But what are the contents of corporate social responsibility?

Common understanding of corporate social responsibility (CSR) in Germany

Corporate Social Responsibility (CSR) refers to the perception of social responsibility by companies beyond legal requirements. CSR stands for sustainable corporate management in the core business, which is anchored in the company's business strategy. CSR is voluntary, but not arbitrary.

Companies assume social responsibility in particular by:

- Treating employees fairly, promoting and involving them,
- using natural resources sparingly and efficiently,
- taking care to produce in a socially and ecologically responsible manner in the value chain - within their sphere of influence,
- uphold human rights and ILO core labor standards and help to enforce them internationally,
- make a positive contribution to the community,
- invest more in education,
- promote cultural diversity and tolerance within the company,
- advocate fair competition,
- Promote measures to prevent corruption,
- establish transparency with regard to their corporate governance,
- respect consumer rights and consumer interests.

Sustainable development is a task for society as a whole, especially in view of economic and financial crises. Against this background, CSR is to be understood as an essential contribution by companies to sustainable development in the fields of action market, environment, workplace and community. Companies involve internal and external stakeholders in the strategic orientation of their diverse CSR activities. These include, for example, employees and their representatives, non-governmental organizations, consumers and government institutions.

The task of politics is to create a positive environment for CSR. In this way, CSR can

can improve the conditions for sustainably functioning markets and be profitable for society and companies. Strategically designed CSR is increasingly becoming a competitive factor. In particular, the visibility and credibility of CSR is crucial for consumers and also for investors. Transparency is important here. At the same time, CSR strengthens social cohesion and trust in the social market economy and contributes to the social and ecological shaping of globalization.

Strengthening the community through regional and local involvement is part of

CSR. Small, medium-sized and large companies are already committed to the common good. commitment. This commitment on the part of companies has a significant influence on a positive image of companies and promotes acceptance of business in society.
Corporate social responsibility has a long tradition in Germany. Social and environmental issues are regulated by law at a high level in this country. What are highlighted elsewhere as CSR activities by companies are often regulated by law in Germany. In addition, internationally agreed guidelines - such as the ILO's Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy, the OECD's Guidelines for Multinational Enterprises and the United Nations Global Compact, but also international environmental standards - serve as a benchmark or obligation. The perception of CSR against the backdrop of our welfare state framework and international obligations is therefore also important for the positioning of German companies in international competition.Source: http://www.csr-in-deutschland.de/portal/generator/8276/property=data/2009_04_28_zweites_csr_forum_anlage.pdf

One could object somewhat nastily to the goals of Corporate Social Responsibility, that after all the goals and behaviors formulated there are nothing new at all, but should be principles of every social entrepreneur. But in the times of neo-liberalism and limitless profits, this basic ethical attitude seems to have been lost on many corporate leaders... In a similar vein, Imbusch and Friedrichs (2012:129) make the following remark about financial service providers: "Nowhere is the gap between the propagated general welfare by means of CSR and a truncated understanding of responsibility more evident than in the unmanageable, market-endangering practices of financial institutions in the financial markets, which have ultimately caused considerable disintegration processes at all levels in the societies concerned and beyond." And even more pointedly, "Obviously, establishing CSR in companies is not enough to effectively integrate responsible behavior into everyday business practices. The pursuit of CSR activities alone is thus no guarantee that companies will not stray from the path of virtue. Rather, what is needed is a new business and corporate ethic if companies and financial institutions want to regain their lost credibility" (Imbusch/Friedrichs 2012:135).

The OECD has also advocated responsible corporate governance principles in recent years and decades. The OECD Guidelines for Multinational Enterprises-which celebrated their fortieth anniversary in 2016-include standards on the following topics, among others: Transparency to the public, human rights, labor rights, environmental standards, anti-corruption, consumer protection, research, competition policy, and taxation (see

Nieuwenkamp in Die Volkswirtschaft 7-2017:13) By the summer of 2017, 47 countries had already signed these standards, and not only the 35 OECD countries, but also countries such as Argentina, Brazil, Costa Rica, Colombia, Morocco, and Ukraine. However, one would have to critically note that - given that the Guiding Principles have been in existence for 40 years - basically quite little has been achieved so far.

In Switzerland, a broad coalition of about 80 civil society organizations and aid agencies wanted to take a different path than (voluntary) CSR or the not very effective OECD standards: With their "Corporate Responsibility Initiative," they wanted to oblige Swiss companies to continuously review the impact of their activities on human rights and the environment, to take measures if necessary, and to be liable for damages. Essentially, this was to make such damages actionable in Swiss courts (cf. Bär in Luzerner Zeitung, 11.10.2016:5).

The problem of such initiatives is, of course, that it is not enough to subject only the individual companies in the national states to such a duty - as long as the others continue as before. Only a global green economy that sets the same rules for all could help.

However, the idea of "green growth" is rejected in principle by many economists. For example, it is questionable whether even very low growth is compatible with climate targets (see Gadrey in Le Monde Diplomatique, Nov. 2015b:23). According to a forecasting model by economist Michel Husson, the IPCC's most modest climate goal-a halving of global greenhouse emissions from 2010 to 2015-would only be achievable with a significant slowdown in GDP growth. And the most ambitious climate goal - an 85% reduction in CO2 emissions by 2050 - seems out of reach anyway (see Gadrey in Le Monde Diplomatique, Nov. 2015b:23).

2.3 Sustainable management of raw materials

The sustainability of the economy, but also of individual companies, can be seen very clearly from the management of raw materials and energy.

Apart from a sharp slump during the financial crisis, commodity prices in the three groups of fuels - i.e. oil, natural gas and coal -, metals - such as copper, aluminum and zinc as well as diamonds - and agricultural commodities - such as wheat, palm oil and wood - rose strongly until spring 2011 (cf. Gmür in Neue Zürcher Zeitung, 1.6.2013).

However, the situation looks somewhat different if one goes back further and compares real prices instead of nominal prices. Thus, since 1934, commodity prices have risen much less in nominal terms, and if inflation is deducted, commodity prices actually declined.

This trend continued again after 2011: for example, since spring 2011, commodity prices fell by a full 9% by mid-2013, according to the International Monetary Fund's commodity index (Gmür in Neue Zürcher Zeitung, 1.6.2013). After 2014, a similar picture emerged, as can be seen, for instance, in the example of precious metal prices.

If one compares this development of commodity prices with the economic growth of the individual periods, one quickly recognizes that the opinion of Meyer (2010:169) can certainly be empirically proven that a decoupling of growth and resource consumption is possible. This is true if it is possible - as Meyer (2010:169) writes - "to reduce the use of resources per unit of gross domestic product." Although the objection of Jackson (2009) and other critics of the decoupling strategy is broadly correct that sustained economic growth has always been accompanied by rising resource consumption, there are sufficient counterexamples - for example, of countries that were able to keep their energy consumption at a stable level with a committed climate policy and still showed economic growth (cf. Meyer 2010:169). The fact that the consumption of raw materials usually increased during economic expansion phases has more to do with the lack of ecological awareness of the time than with an automatic mechanism.

Busscher and Churet (in Swiss Sustainability Guide 2011:22) explain the long-term real fall in commodity prices since 1975 at the latest as follows: In times of short-term scarcity of raw materials, three mechanisms start to operate:

1. as a result of high demand, the frequently used raw material A is replaced by another raw material B (substitution);

2. as a result of the price increase, low-grade raw material deposits also become interesting and the proportion of reuse (recycling) increases;
3. more money is spent on research and development of new technologies, which leads to a more efficient use of resources and a decrease in processing costs.

In the long term, this reduces the demand for raw material A and thus also its price.

Müller (2009:16) pointed out that the commodity market does not function on its own according to socio-ecological principles. For this to happen, there needs to be

"1. a mechanism that makes raw material waste and high emissions transparent for the correct allocation of costs in a 'Charter of Incorporation', as called for in the USA. It lists all the social and natural commons that a company uses and their value. This is matched by obligations that corporations have to protect the natural and social commons. This obliges them to preserve and cultivate the natural and social commons;
2. a Europe that becomes the engine of ecological modernization. No other continent has such good starting conditions. Initiatives must come from the EU that build on its leading international role in climate protection. These include a targeted use of CO2 pricing for the development of ecological markets and an international environmental partnership;
3. measures to curb overexploitation, speculation and corruption in the global economy. One step is a marginal tax offset for additional costs resulting from ecological modernization. France has proposed imposing a 'climate tariff'. This would reduce environmental dumping and encourage ecological innovation. The economic fields of the future could be developed more quickly, in particular through an efficiency revolution in the use of energy and raw materials. A further step is to apply the Tobin tax at least to forward transactions in energy, raw materials and foodstuffs in order to skim off speculative profits. The overall transparency of payment flows in these areas must be improved.
4. reforms of the global economy so that a synthesis of global monetary order and national social, employment and environmental policies becomes possible. This requires an International Monetary Fund which, as a supervisory body, holds debtors and creditors accountable. The goal is a new world monetary order that starts from

the principle of solidarity of all for all and promotes the financing of the efficiency revolution" (Müller 2009:16).

Already today, there is an increasing number of conflicts over raw materials, including water. In this context, water is increasingly becoming a central raw material for the basic supply of populations. For example, the collapsing water supply in Syria in 2011 was one of the causes of the civil war, as many rural residents were forced to migrate to the cities (see Waslekar in Neue Zürcher Zeitung, Feb. 18, 2016:10). Elsewhere, governments chose a better path: "In the 1960s, Guinea, Mali, Mauritania and Senegal faced each other as ideological enemies. When the great drought in the Sahel led to water shortages in the early 1970s, these countries could have turned to extreme nationalist policies. Instead, they established an organization to jointly manage the Senegal River. Today, canals, dams, hydropower and navigation are managed jointly in the four countries, to the benefit of the entire region" (Waslekar in Neue Zürcher Zeitung, Feb. 18, 2016:10). However, the development elsewhere was much more negative. It is known, for example, that the core areas of the jihadist terrorist organization Boko Haram in northeastern Nigeria and in the border region with Cameroon were and are exposed to a great water shortage with desertification tendencies at the turn of the millennium.

Other raw materials are also in great demand.

"The hidden treasures of the Arctic" - an example of tomorrow's raw material conflicts
"The raw material deposits of the Arctic are still hidden under the 'eternal ice'. But the more the ice cover thaws due to the greenhouse effect, the closer the possibility of recovering these treasures. Russian researchers suspect ten billion tons of oil and gas in the so-called Lomonosov Ridge, an undersea mountain range that stretches between Greenland and eastern Siberia and runs pretty much under the North Pole. Under the United Nations Convention on the Law of the Sea (UNCLOS), the five countries bordering the North Pole - Russia, Canada, the United States, Denmark and Norway - are already allowed to explore, fish and extract mineral resources within a 200-nautical-mile zone. But the five countries are concerned about the areas beyond the 200 nautical miles off their coasts. Anyone who can prove that the area beyond 200 nautical miles is a geological part of their continental shelf is allowed to exploit the seabed there. Russia in particular, but also Canada and Denmark, therefore want to show that the Lomonosov Ridge is the natural extension of their continental shelf in order to win legal claims to the mineral resources."
Source: Bleischwitz/Pfeil 2009:23.

In the first half of 2011, raw material prices for copper, cobalt, iron and crude oil climbed to record levels. The price of copper per ton, for example, was at an all-time high of 10,000 US dollars at the beginning of 2011. The price of a barrel of Brent North Sea oil rose to more than 110 US dollars (Busscher/Churet in Swiss Sustainability Guide 2011:20). In October 2011, the USA attempted to curb speculative trading in commodities. Thus, on October 18, 2011, the regulatory agency Commodity Futures Trading Commission (CFTC) issued a regulation limiting the share of contracts in the various markets for commodities that an investor may hold This regulation covered 28 commodities, including various metals, energy products and foodstuffs, as well as gold and certain types of crude oil for the first time (Neue Zürcher Zeitung, October 20, 2011). Previously, only nine agricultural commodities - including corn and wheat - had been affected by this regulation. Only those buyers of contracts who wanted to hedge against price fluctuations of their own stocks were excluded.

But what is the actual relationship between the individual commodities in terms of volume and other exports? According to the WTO and Unctad, in 2011 a total of more than $6 trillion worth of raw materials were exported, which corresponded to about one-third of global trade in goods - excluding services (see Gmür in Neue Zürcher Zeitung, 1.6.2013). To this was added $4 trillion in exported services. Whereas in 1995 commodities accounted for 24% of all goods exports, by 2011 this figure had already risen to around 35%. According to Unctad, this increase is mainly due to higher prices (cf. Gmür in Neue Zürcher Zeitung, 1.6.2013). Among commodities, fuels - i.e. oil, natural gas, and coal - are the most significant, accounting for US $3.17 trillion, or more than 50%. In contrast, agricultural commodities accounted for 29.3% of total commodity trade, and metals thus less than one-fifth. If one considers that some of the agricultural commodities - such as wheat, corn, soy and sugar cane - are also used for energy, then the share of energy fuels is even higher (cf. Gmür in Neue Zürcher Zeitung, 1.6.2013).

A central problem of the commodity markets is the extremely uneven distribution of raw material resources: for example, in 2011, of the global phosphorus production - the basic building block of phosphate urgently needed in agriculture - 38% came from China, 15% from the USA and 14% from Morocco/Western Sahara (cf. Gmür in Neue Zürcher Zeitung of

15.10.2012). However, it is estimated that today 70% of the world's usable phosphate reserves are located in the Morocco and Western Sahara area. Completely dependent on phosphate imports are the European countries, India (27% of the world's phosaphat imports) and Brazil (10% of phosphate imports), as well as a whole number of smaller countries (see Gmür in Neue Zürcher Zeitung of 15.10.2012).

More and more, bio-commodities are used as energy yields and for industrial production. They are increasingly competing with food.

specially for resource-poor countries, the recycling of waste and used raw materials is extremely interesting. In a "Performance Report" in June 2011, the association Swiss Reycling pointed out the economic importance of recycling glass, PET, aluminum, cable and other household waste. In 2009, for example, the Swiss population brought 331,000 tons of glass to collection points, the equivalent of 95% of demand. In addition, 37,000 tons of PET - or 81% of the demand - were recycled. In 2010, more than 90% of aluminum cans and 84% of tinplate could be produced from recycled material (Fuchs in Neue Zürcher Zeitung, 21.6.2011). In contrast, there was considerable recycling potential in cell phones, for example, of which only just 18% was recycled.

In contrast to inorganic raw materials, which do not regenerate or take millions of years to regenerate, many organic raw materials form a resource reservoir that regenerates itself under optimal conditions or is hardly exhausted if used sparingly. In a study, Crédit Suisse, WWF and McKinsey have shown that investments in biodiversity projects not only make ecological sense, but can also be very interesting financially (cf. Schäfer In Neue Zürcher Zeitung, 26.5.2014:22). Worldwide, the need for investment capital in the biodiversity sector was estimated at $300 to $400 billion in 2014, while currently only $52 billion had been invested in this area - and of that, only 80% was public funding (cf. Schäfer In Neue Zürcher Zeitung vom 26.5.2014:22). Into this gap jumps the so-called Conservation Finance. The study mentions approximately the following investment areas of (private and for-profit) Conservation Finance: sustainable production of food such as cocoa, eco-tourism offers or sale of biodiversity certificates.

However, at the moment (2014), conservation finance products are almost only accessible to qualified investors and make sense with an investment horizon of seven to ten years because they are illiquid investments. In contrast - according to Schäfer In Neue Zürcher Zeitung of 26.5.2014:22 - in some cases even double-digit percentage returns can be achieved.

2.4 Sustainable institutions

Commons represent an intermediate form of public and private goods. Precisely because commons and their institutions - e.g. production cooperatives or commons) focus on the interests of their users - or should! -in such institutions, there is usually a greater chance of ensuring sustainable economic activity. Elinor Ostrom (in Le Monde Diplomatique, March 2011:17) pointedly noted that "commons institutions are in danger above all when officials assume that they do not exist at all (or that they accomplish nothing) simply because they were not initiated by the government itself. Yet a robust commons sector is of enormous importance to people's lives. Unless we find ways to improve the constitutionality of the commons; unless we learn to manage our collective resources better, the absence of commons institutions in the 21st century will lead to profound social and economic problems." It should be remembered that commons institutions are not simply a relic of the past, but a tool for maintaining a balance between economic interests of individuals, (limited) community use, and the longer-term conservation of resources.

From an institutional point of view, all those legal forms are particularly suitable for sustainable management whose shares (ownership) are not or not easily alienable (associations, foundations) or do not yield a profit when transferred to others (e.g. cooperatives). In these institutions, the focus is generally not on individual ownership - as in the case of a share or bond, for example - but much more on membership of a community and the (shared) right to use resources (e.g. housing cooperative).

2.5 Sustainable economy and social partnership

At first glance, it may seem surprising that social partnership is mentioned in the context of sustainable economy. However, research by Friedrich Schneider and Alexander F. Wagner on institutions of conflict management such as the social partnership between employers and trade unions has shown that these are closely related to economic growth (see Haigner/Jenewein/Schneider/Wakolbringer in Neue Zürcher Zeitung, 16.4.2014:29). In this context, the so-called costs of social partnership can be understood as the restriction of the social partners' possibilities to pursue their own, personal interests at the expense of the general public. It can be assumed that this "rent-seeking" has a negative impact on economic growth. In contrast, there is a positive effect of social partnership, which the authors call the "coordination effect" (cf. Haigner/Jenewein/Schneider/Wakolbringer in Neue Zürcher Zeitung, 16.4.2014:29). Apparently - according to the hypothesis - this effect increases with the size of the public sector measured in terms of gross domestic product. In doing so, the researchers examined a number of indicators for the period from 1990 to 2011, such as gross domestic product per capita, the Gini inequality coefficient, government spending, education spending, trade and investment volumes. Indicators of social partnership included the demarcation between employee representatives, the centralization of wage negotiations, the proportion of dependent employees with collective agreements (e.g., collective labor agreements), the scope and nature of social pacts, decision-making authority over strikes and labor disputes, and the institutionalization of automatic wage adjustments. The authors came to the following conclusion: Above a certain size of the public sector, the (negative) rent-seeking effect increases as the size of the public sector continues to grow: Therefore, above government spending of 53.7%, the overall effect of social partnership decreases: Accordingly, "the smaller the public sector and the more limited the possibilities for rent-seeking, the greater is the influence of social partnership on economic growth" (Haigner/Jenewein/Schneider/Wakolbringer in Neue Zürcher Zeitung, 16.4.2014:29).

However, it must be added that an excessively low public sector share can probably reverse the effect, because the state has a redistributive effect in the lowest income segment in particular (social welfare, social insurance and, in Switzerland, supplementary benefits).

For long-term and sustainable growth, it can be said, at least based on these studies, that an excessive public sector has a negative impact on sustainable economic growth - certainly also because it can paralyze the individual's economic initiative and thus reduce economic growth, as shown, for example, by planned economies (e.g. Cuba today!). But the opposite - too small a state sector - is also likely to harm economic growth and sustainability. Rogall (2015:634) also points out that "in the future, tax cuts must be abandoned and the state share stabilized at a higher level."

Thus, the example of Switzerland in particular, which sinks significantly lower when the second pillar (= m.z.S.) is included (middle chart), shows that the complexity of individual factors is very large and their effect partly contradictory, in that, for example, individual saving is both desirable and sustainable in macroeconomic terms. Abandoning the second pillar would immediately lead to the impoverishment of a considerable part of the (elderly) population, which would cause government benefits to skyrocket immediately.

In this context, it seems useful to refer to another form of regulated working and wage conditions: To collective labor agreements. This instrument, which has worked well in Switzerland for decades, can be used between employers and employee organizations: One or more trade unions conclude a collective labor agreement with an employer. In doing so, the Federal Council can decide to subject all employers (and employees) in an occupational or economic sector or an entire industry to such a collective labor agreement (declaration of general applicability by the Federal Council, cf. Kindler/Baumberger in Die Volkswirtschaft 4-2014:16). As a rule, the collective labor agreement assures employees of certain minimum standards, while the employees or the unions refrain from using the right to strike or other collective measures. In 2012, nearly 1.8 million wage earners in Switzerland, or about 49% of all employees, were covered by a collective labor agreement (according to Kindler/Baumberger in Die Volkswirtschaft 4-2014:15; Beobachter 8/2014:12 and the Federal Statistical Office). The number of collective labor agreements/collective employment contracts (CLA/CEC) has increased continuously since the turn of the millennium:

	2001	2007	2012
Number of Collective Employment Contracts (CEC) absolute	78	98	100
Number of employees under Collective Employment Contracts (CEC) absolute	1‘234‘500	1‘475‘900	1‘796‘300
Number of employees under Collective Employment Contracts (CEC) in percent	38%	41%	49%

Sources: Beobachter 8/2014:12 und Bundesamt für Statistik.

However, it should be borne in mind that the population as a whole has grown relatively strongly, and a not inconsiderable proportion of the population is self-employed. Number of employees under CLA absolute

2.6 Instruments to promote a sustainable economy

Rogall (2015:630) has suggested that the economy should be aligned with the following organizing principles to transform it:

1) Restructuring and greening the tax and contribution system towards capital turnover tax; higher top rates of wealth taxes or introduction of wealth taxes if not already in place; profit and sales taxes to finance education, environmental protection and social security; drying up tax havens as well as drastic prosecution of tax evasion),
2) Policies of selective growth for the purpose of "the ecological modernization of the capital stock and the expansion and stabilization of the supply of merit goods (esp. in education, research and development)" (Rogall 2015:630).
3) Reduction of precarious employment and the reduction of total working hours to 20 - 33 hours per week and their distribution among all people (cf. Rogall 2015:630 and 636).

4) Regulation of financial markets (expansion of banking supervision, ban och speculative financial products, financial transaction tax, division of banks into commercial and investment banks).
5) Strict rules for company sales (e.g. regarding equity ratio).
6) "Remunicipalization of companies providing services of general interest" (Rogall 2015:630).

Among other things, a capital transaction tax ("Tobin tax") of 1% is to be introduced to finance the costs incurred in this process (cf. Rogall 2015:638).

There is a whole range of instruments for promoting sustainable business. These include

- Bids and bans, e.g. in the form of limit values, specifications for production processes, etc. The disadvantage of bans and prohibitions is that they require a great deal of control.
- Self-regulation: Industry associations or companies impose standards, targets and controls on themselves. Here, the focus is on the source and there are fewer time-consuming controls. The disadvantage is that these self-regulations sometimes do not go far enough and are not always adhered to by all - either by companies that evade this agreement or because there are too few controls and hardly any possibilities for sanctions.
- Internalization of external costs: All costs - including environmental and social costs borne by the general public - are imposed on the polluter. This can be done by means of appropriate prices, but also by means of tradability of property rights, rights of use and rights of action, taxation according to the polluter-pays principle, incentive taxes or environmental certificates, etc. (cf. Eisenhut 2012:129-131).

However, incentive taxes have to be very finely balanced, otherwise their effect can turn into the opposite or undesirable developments occur. An example of this is the performance-based heavy vehicle fee (HVF) in Switzerland, which was introduced in 2001 and obliges all road hauliers to pay a fee for all journeys made by commercial vehicles with a gross weight of over 3.5 tons. The amount of the LSVA per trip is based on the number of kilometers traveled and the vehicle's emissions. Of the approximately 1.5 billion Swiss francs

per year that the levy raises, two-thirds goes to the federal government and one-third to the cantons (cf. Schneeberger in Equity 10/2013:42). In this context, the HVF was primarily intended to limit the growth of freight traffic on the roads and to promote the shift of freight traffic to the railways. In fact, freight transport by rail remained stable and even decreased since 2008 (cf. Schneeberger in Equity 10/2013:42). From 2001 to 2010, road increased its share of freight transport from 56% to 62%, mainly due to fewer empty truck trips. On the other hand - as an undesirable consequence of the HVF - until 2009 many smaller transport companies were swallowed up by the big ones, which made the market even more controlled by the big companies.

But what happens if - as in Switzerland with the CO2 tax on heating oil - only individual sectors are subject to these taxes, while other sectors or products - e.g. kerosene in air traffic, which is several times as harmful - are exempt? Moreover, especially in the case of heating older buildings, it is not uncommon for situations to arise in which no other alternative is available (e.g., for structural reasons, for reasons of historic preservation, etc.).

Both incentive taxes and environmental taxes must be periodically evaluated and, if necessary, adjusted.

2.7 Sharing economy as a solution?

For some years now, the "sharing economy" has become popular - especially among young people. At the heart of this is the idea that the benefit of a product is more important than its ownership. Sharing economy shows up for instance in the form of car, bike or ride sharing, clothes swapping, urban gardening or food sharing, coworking or free software - and in all these areas a great growth can currently be observed (cf. Loske in Humane Wirtschaft March/April 2016:14).

In this context, the sharing model can be a generator of social cohesion and sustainable development, but it can also lead to ever increasing competition of all against all and to an additional economization of life (cf. Loske in Humane Wirtschaft March/April 2016:14). Two views dominate the publications on the sharing economy, an optimistic and a pessimistic

one. For example, Jeremy Rifkin argues on the optimistic side that sharing transportation, tools, toys, buildings, appliances, and machines means an enormous saving of resources and thus a relief of the environment. Others see it as strengthening social cohesion and reinforcing altruistic attitudes. Conversely, representatives of more pessimistic views such as Sascha Lobo and Evgeny Morozov warn of a "dumping hell" through an economy that is open at the bottom. In a so-called "platform capitalism," for example, there is a threat of the erosion of welfare state achievements and wages, with the only concern being money (savings) and economic calculation. This is exactly the opposite of what the optimists hope for: Desolidarization and "business economization" of society. An example of this development is Uber, for example, which strongly competes with the long-established cab companies - and at the same time no longer complies with their standards, e.g. in the liability area and in other respects.

In addition, the issue of living wages will undoubtedly become an issue again: Either cheapest offers on the consumer side or living wages. However, the question would first have to be clarified as to whether there might not also be answers in the sharing economy that could overcome this dichotomy. In any case, we can look forward to future discussions.

3. Control Questions

1. What are external costs?
2. Why do external costs have to be included in the price calculation?
3. To whom should external costs be passed on and why?
4. What was the thesis of thomas malthus?
5. Name and explain the five core postulates of sustainable development.
6. Why are the current sustainability ratings of companies insufficient?
7. Outline and evaluate the three points of Bernholt's concept of sustainable entrepreneurship.
8. What is the purpose of "Corporate Social Responsibility" and what are its contents?
9. What is the relationship between social partnership, public sector and (sustainable) economic growth?

10. Name three types of instruments to promote sustainable business.

11. What are the advantages and disadvantages of the shared economy, to what extent is it an answer to the problem of growth?

4. Links

Corporate Social Responsibility in Deutschland
http://www.csr-in-deutschland.de/

Ressourcenknappheit, Innovation und nachhaltige Entwicklung
Text von Prof. Dr. Lucas Bretschger
https://www.ethz.ch/content/dam/ethz/special-interest/mtec/cer-eth/resource-econ-dam/documents/people/lbretschger/ressourcenknappheit.pdf

Was ist nachhaltige Entwicklung?
www.nachhaltigkeitsrat.de/nachhaltigkeit

Gute Gründe für die CO2-Lenkungsabgabe
https://naturwissenschaften.ch/service/news/76977-gute-gruende-fuer-die-co2-lenkungsabgabe

Ökosteuer – Stand der Diskussion und der Gesetzgebung in Deutschland, auf der EU-Ebene und in den anderen europäischen Staaten
Kurzstudie im Auftrag des Rates für Nachhaltige Entwicklung
http://docplayer.org/6612719-Oekosteuer-stand-der-diskussion-und-der-gesetzgebung-in-deutschland-auf-der-eu-ebene-und-in-den-anderen-europaeischen-staaten.html

„Finanzloch stopfen mit Umweltsteuern?“ und andere Texte.
http://www.wir-klimaretter.de/nachrichtensep/politik-nachrichten/5642-finanzloch-stopfen-mit-umweltsteuern

Umweltsteuern und Umweltabgaben in der Republik Österreich und der Bundesrepublik Deutschland
Text von Michael Stahlschmidt
http://www.google.ch/url?sa=t&rct=j&q=&esrc=s&source=web&cd=7&ved=0CEcQFjAG&url=http%3A%2F%2Fd-nb.info%2F967835496%2F34&ei=6yN0UOTRNsry4QTjx4HoAQ&usg=AFQjCNE4gKdj7DfwfmZIWJW1r9PkjKLyCw&cad=rja

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