

ENVIRONMENTAL ISSUES IN FOOD LAW

Francesco Bruno

SUMMARY: 1. Introduction: environmental protection and food production – 2. EU environmental rules and principles – 3. Climate Change issues and food production - 4. Food as biodiversity - 5. Food industries as polluters: water discharge and waste Management.

1. Introduction: environmental protection and food production

There are extensive and tight links between ecology and the various productive sectors, mainly relating to how the activities are conformed, through negative requirements or obligations falling on entrepreneurs (i.e., waste management and water-waste discharges, see below). But the relationship between food production and environmental protection can be analyzed from two different perspectives.

Industrial food industry is a business sector which, like others, produces negative “externalities”: it is a possible source of land, water and natural habitats pollution, impacting the balance of the ecosystems.

Except that, unlike other sectors of business, the food business needs a healthy environment, as the products involved in its production (food) are directly agricultural products (or zoo-technical) or transformed agricultural products (or zoo-technical). And for agriculture, natural resources are themselves elements of the business, its interests are the same of the collectivity for a healthy environment, as the abuse of natural resources can void the advantage of production determining a detriment for the company¹.

¹ F. ADORNATO, *Food security and independent government bodies*, in Adornato and Logunov (editors), *Russia and Italy. The problems of food security*, Moscow, 2007.

Consequently, in this context, food business entrepreneurial activity experiences, contextually, a dual role in the production of positive and negative “externalities”. On the one hand, it is the addressee of the rules, impositions, constraints and limitations in acting to safeguard the environment, typical of each form of production.

On the other hand, being agriculture an important part of the "food chain", the food business has a function of protection, preservation and regeneration of the environment and biodiversity and is the recipient of specific rules². In this work, we will examine (briefly), both the first regulations (in particular those for the protection of climate change) and the second, (in particular those in defense of biodiversity), in a context of European law.

2. EU environmental rules and principles

Since it has been reached the awareness of the growing scarcity of resources and the value of quality of life, in all states have been introduced measures and regulations aimed at safeguarding the environment and the natural resources. It is the so called environmental policy, which implies the adoption of rational management measures for the benefit of natural resources and the conversion of the productive system in the direction of technological choices with lower impact on the environment and on the citizens' health, to help achieve a sustainable development of economic activities.

Many of Member States (like Italy, for example), thanks to its membership within the European Union, has introduced and implemented a set of rules in the environmental field, although the rules to protect the environment (as occurred in the food industry indeed³) have been characterized and influenced more by emergency considerations than prevention. The EU lawmaker has never bothered to define the term "environment", neither has provided a unitary notion of it, and the first orientation of Community environmental policy was actually enumerated in

² F. ALBISINNI, *The Path of the European Food Law System*, in L. COSTATO and F. ALBISINNI, *European Food Law*, Padua, 2012.

³ L. COSTATO, *Principles and Rules of European Food Law*, in L. COSTATO and F. ALBISINNI, *European Food Law cit.*

various action programs (from 1973 to date have been six), which – even if in summary - have defined an intervention strategy for the preservation of the territory of all Member States. The investigations are based on the "polluter pays" principle, according to which the costs of pollution must be borne by the responsible party.

This principle, introduced by the Single European Act pursuant to art. 174 par. 2 of the Treaty of Rome and now by art. 191 of the Treaty on the Functioning of the European Union-TFEU, is, along with those of precaution, prevention and correction by priority at source, of environmental damage, the "cornerstone" of the environmental policy of the European Union, which imposes a series of obligations and requirements to the citizens in order to protect the resources⁴. Community action in the field of environment which is also based on another fundamental principle, the principle of "sustainable development": art.1 of TFEU, in fact, has disposed the promotion of a harmonious and balanced development of the economic activities, through a sustainable growth respectful of the environment.

Through art. 191, par. 2 of the TFEU, environmental policy has been included within those actions directly aimed at achieving common goals of the EU. But the Community does not have exclusive jurisdiction over this policy (that is included in the shared competence) and therefore, in accordance with the principle of subsidiarity, shall act only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States and might, therefore, by reason of the scale and effects of the proposed action, be better achieved at a Community level.

However, even the Member States, when assessing the level of health protection and the safeguarding of peoples' lives to be ensured by national law-order, are required to verify the existence of the Community principles for environmental protection, as they get applied in relation to the action of the Community authorities. For example, General Advocate Mr. La Pergola,

⁴ On the reform of the Treaty of Lisbon, in particular with a consideration of agriculture and food issues, F. ALBISINNI, *I codici europei dell'agricoltura dopo Lisbona*, in L. COSTATO, P. BORGHI, L. RUSSO, S. MANSERVISI (editors), *Dalla riforma del 2003 alla PAC dopo Lisbona. I riflessi sul diritto agrario, alimentare e ambientale*, Napoli, 2011, 17.

in his Opinion of May 19, 1999 within the Case C-94/98 *The Queen c. The Licensing Authority Established by the Medicines Act 1968*, has pinpointed: «the competent authority or the national courts of import Member State, in analyzing the level at which the protection of health and life of persons is guaranteed by national law, are required to verify the existence of the principles of precaution and preventive action, as per those applied by force of the Treaty to the action of the Community authorities».

In other words, since the protection (at a high level) of the environment and human health, is already recognized by the Court of Justice (i.e., judgment of February 7, 1985 in Case 240/83 *Association de défense des Bruleurs of huiles usagées*; judgment of September 20, 1988 in Case 302/86 *Commission v. Denmark*) as one of the essential objectives of the Community, it must also be pursued by the Member States. Thus, in the event that damages to the environment are the result of the exercise of productive activities, the “polluter pays” principle implies that environmental damage shall be borne by the producer and, therefore, calculated as production costs.

This principle is interpreted by the legal literature in a double reading. Firstly, as an expression of the so called principle of environmental economy, based on the assumption that the environment must be recognized an economic value and that every intervention value which modifies the ecological balance implies a cost that cannot be disregarded. It constitutes the legal formalization of the need for “internalization” of economic-imbalances caused by pollution, i.e. of the imputation of environmental cost to the party who/which alters the ecological balance. Secondly, the polluter pays principle could be considered as a legal basis for imputing a “liability” to the party who pollutes, implying the obligation to compensate the caused damage. In other words, it is indicated as a source for the determination of damage compensation rules based on civil liability⁵.

The principles of prevention and correction instead, establish the need to prevent or correct from the beginning the pollution damages, rather than subsequently counteract their effects. In the environmental sector, as easily understood, prevention

⁵ A. GERMANO', E. ROOK BASILE, F. BRUNO, M. BENOZZO, *Commento al Codice dell'Ambiente*, Torino, 2008

takes a priority, as the risky nature of certain activities may determine as useless any damage repair already performed. There are various judgments of the Court of Justice and, mostly, the arguments of the General Advocates in the preparation of their final statements that uptake, by priority at source, the principle of correction of environmental damage to justify the decisions of interventions to an "early" pollution phase⁶.

3. Climate Change issues and food production

According to scientific literature, the food-system as a whole, viewed as a "chain" (agricultural production, processing, distribution, consumption and waste management), is a prior factor contributing to that phenomenon called "climate change", which is leading to desertification of the planet⁷. In particular, a study of the United Nations has confirmed that agriculture and food consumption are among the principal agents of environmental threat, with particular effects on the modification of ecosystems and climate, on the use of water resources and toxic emissions⁸. And it was estimated that in 2005, 9% of the total emissions of greenhouse gases of the European Union were due to agriculture. With reference to the effects of the entire food chain, from producer to consumer, a report of the European Union has calculated that the food industry is responsible for 31% of greenhouse gas emissions by the 25 (at that time) EU member states.⁹

⁶ See, for example, Court of Justice 14th march 2002, cause C-161/00, *Commission v. Germany*.

⁷ Over the past hundred years have seen an overall increase in the average temperature of the Earth's surface by 0.74 ° C. The period between 1995 and 2006 was the warmest on record since the survey started in 1850. We are also seeing a rise in ocean temperatures and sea levels, the rapid Arctic warming, ocean acidification, an increase in extreme weather events and changes in the life cycles of plants and animals. For more details, *Food Climate Research Network* (2008) *Cooking Up a Storm*. www.fcrcn.org.uk/sites/default/files/CuaS_web.pdf.

⁸ United Nations Environment Programme (2010) *Assessing the Environmental Impacts of Consumption and Production*. <http://www.unep.fr/shared/publications/pdf/DTIx1262xPA>.

⁹ Food Climate Research Network (2008) *Cooking Up a Storm*. www.fcrcn.org.uk/sites/default/files/CuaS_web.pdf. Therefore, according to the report of the Intergovernmental Panel on Climate Change (IPCC) at zootechnic pro-

Therefore, international and European rules aimed at reducing emissions of greenhouse gases in the atmosphere apply to the food industry as well (first of all for the needs related to the production of energy), whereas, as already been stated, «the modern agri-food system is based on the presumption of an unlimited availability of cheap fossil-fuels and is ecologically unsustainable», with the paradox that «it is precisely the food industry which is more exposed to the risks of climate change induced by greenhouse gases, both through the alteration of the traditional and climate cycles and through environmental degradation, drought, salinization and erosion of soils, pests, fungal and viral diseases and desertification»¹⁰.

The levels of regulation of greenhouse gas emissions are three: the international level, the European level, in addition to the national one (that we will not mention herein). At international level, the first attempt to fight and reduce emissions of pollutants dates back to May 9, 1992, when it was approved in New York, under the auspices of the United Nations, the Convention of Rio de Janeiro (*United Nations Framework Convention on Climate Change* - UNFCCC), which intent was to stabilize concentrations of greenhouse gases in the atmosphere in order to prevent dangerous interference with the climate system. The Convention, however, as “soft law”, was not very effective and therefore not binding on the Parties¹¹. Specifically, the Convention provided that the parties assumed a generic commitment to bring carbon dioxide emissions to the levels of 1990¹².

duction is recognized almost a fifth of global emissions of greenhouse gases (*Intergovernmental Panel on Climate Change (2007) Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*).

¹⁰ M. MORESI, S. MASI, G. MASSINI, *Industria alimentare italiana: quali prospettive di ricerca e sviluppo?*, 16, documento presente nel sito internet della Società Italiana di Scienze e Tecnologie Alimentari (SISTAL), 2008, in <http://www.sistal.org/doc/RELAZ-SISTAL-ISMEA.pdf>.

¹¹ M. GERRARD and KUH (editors), *The Law of adaptation to Climate Change: United States and International Aspects*, ABA, 2012

¹² For a review of international, European and Italian Law, see the research program “Climate Change Law in the Word”, on the website of Center of Climate Change Law of Columbia Law School: <http://web.law.columbia.edu/climate-change>.

The international community has instead assumed legally binding commitments with the Kyoto Protocol, which is, to date, the only tool for implementing the UNFCCC Convention. The commitments engaged by the Parties through the Protocol have foreseen a reduction, in the period 2008-2012, of their overall emissions of greenhouse gases by 5.2% compared to 1990¹³. The objective of reducing emissions unfolds through the allocation of specific "Unit" (denominated *Assigned Amount Units* - AAUs) to each country, which must remain within the allocated units. To fulfill these obligations, the Protocol provides that signatory Party states will be able to use specific "credits" through three flexibility mechanisms: *joint implementation*, *clean development* and *emissions trading*¹⁴. Of these mechanisms, the emissions trading has a crucial role, it provides for the establishment of a *cap* of allowed emission, an allocation system of "*emission levels*" and their *trade*. Article. 17 of the Protocol establishes that assignee countries of AAUs that are able to reduce emissions to a greater extent compared to their targets, they are allowed to sell surplus AAUs to other countries that can buy them to achieve their reduction obligations¹⁵.

At Community level, the Kyoto Protocol has been ratified by the Union on June 2nd, 2002, while the proposal for a directive of October 23rd, 2001 was adopted two years later, on 13 October, 2003 (Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 *establishing exchange scheme of greenhouse gas emissions within the Community and amending the Council Directive 96/61/EC*). At the contrary, Kyoto Protocol has not been ratified by the major developing countries (such as China and India) and this is a major

¹³ For Europe 8%. New commitments regarding the reduction of emissions of greenhouse gases for the period 2013-2015 are given in Durban, South Africa, within the United Nations Climate Change Conference 2011 (COP17/CMP7), where he was also amended Protocol Kyoto.

¹⁴ M. GERRARD and FOSTER (editors), [*The Law of Environmental Justice*](#), 2d ed. (2008)

¹⁵ M.GERRARD (editor), *Global Climate Change and US Law*, Review, ABA, 2007 and A. CARLSON, *Designing Effective Climate Policy: Cap-And-Trade and Complementary Policies*, 49 *Harvard Journal on Legislation* 207-48, 2012.

reason that global GHG emissions today are so much larger than the Kyoto Protocol had hoped to achieve.

The Directive introduces a system of exchange (operative since January 1st, 2005) according to which the installations operators/managers are assigned a certain number of units that allow to produce emissions. The total number of allocated allowances established the so called “cap” of emissions which each participant can produce globally. Those who comply with said cap are considered “emissions *creditors*”, with the consequence that they may transfer their “credits” to other states that are above the “cap”. The character of such rewarding legislation is quite evident, as the involved parties who fail to reduce their emissions will have to buy “credits” from other parties to “reach” the cap overtaken due to their excessive emissions ¹⁶.

In general, the Directive is based on two pillars: the authorizations that will be required to all installations operators/managers participating to the system, and mission installments, measured and expressed in tons of equivalent CO₂, which allow their holder (manager of installations) to produce one tonne of carbon dioxide per year. Plant managers are required to return, by April 30 of each year, emission allowances noted on the register, which are corresponding to the amount of emissions released by the plant in the previous solar year. In the event that the presented installments are not sufficient, the Companies become subject to sanctions.

Another important institution foreseen by the Directive is the so-called National Register. Given that the installments exist only in electronic form, any interested party may hold shares and withdraw them from the market provided that it has an open account in the related national Register. The National registers are an essential part not only to ensure efficient trade monitoring at the plant level, but also to verify compliance with the commitments undertaken by the Member States with the burden sharing agreement.

¹⁶ For US experience, M. GERRARD and KUH, cit. and for the interesting experience of California B. CUTTER, M. R. ENION, A. CARLSON and C. HOROWITZ, *Rules of the Game: Examining Market Manipulation, Gaming and Enforcement in California's Cap and Trade Program*, Publication of Emmett Center on Climate Change and the Environment-UCLA School of Law, 2011.

The Directive of 2003 was after amended by so called "*Linking Directive*" issued in 2004 (Directive 2004/101/EC of the European Parliament and of the Council of October 27th, 2004 amending the Directive 2003/87/EC establishing a system for the trading of greenhouse gas emissions in the Community, with reference to the project mechanisms of the Kyoto Protocol), which aims to open the EU up to a shared emission exchange to the project-based mechanisms (JI and CDM).

This attempt to link the JI and CDM to the EU system of *cap-and-trade* has been criticized in literature, since in the latter system, the allocation of "shares" occurs "ex ante" with such mechanism of *cap* and *trade*, in the first one instead, the reduction of emissions is verified ex post, as they are based on a baseline-and-credit approach.

The Directive of 2003 was further amended by Directive 2009/29 (Directive 2009/29/EC of the European Parliament and of the Council of April 23rd, 2009, amending Directive 2003/87/EE, aimed at improving and extend the EU system for the trading of greenhouse gas emissions), which aims at resolving some issues of concern emerged after the adoption of the Directive 2003/87, and at rationalizing and extend the scope of application of the ETS system.

4. Food as biodiversity

The relationship between rules of food production and biodiversity protection can be analyzed from different points of view. First, in terms of those norms direct to enhancement of typical and traditional food products through the recognition of specific "signs and trademark"¹⁷. Moreover, we shall analyzed the food exchange rules, where "exceptions" to the free-market can be provided to protect biodiversity¹⁸. Finally, contractual profiles concerning the relations between producers of genetic material and food companies that make use of it in production processes, shall be also underlined.

¹⁷ On which we refer to S. MASINI, *PDO, PGI and TSG*, in L. COSTATO and F. ALBISINNI (editors), *European Food Law cit.*

¹⁸ As to which we refer to A. JANNARELLI, *Competition Law and European Agricultural and Food Law*, in L. COSTATO and F. ALBISINNI (editors), *European Food Law cit.*

Under this last profile, the importance of the relationship between food production, agriculture and biodiversity protection is summarized in the first “Recital” of the Decision of the Council of the European Union (2004/869/EC) concerning the conclusion, on behalf of the EU, of the International Treaty on Plant Genetic Resources for food and Agriculture: “The global food security and sustainable agriculture depend on the conservation and sustainable use of phyto-genetic resources for research and breeding”. The plant biodiversity is the raw material through which companies, through genetic engineering (but also with genetic improvement¹⁹, develops products and get patents²⁰.

The Government of biodiversity is by nature inherently global: it cannot be rooted in a national legal order and the competent international institution (FAO) already for few years has been attempting a difficult task of balancing the interests of the North and the South of the planet. Lately, perhaps, through a more effective strategy. Indeed, to bring scientific research closer to the territories, and to limit the so-called genetic “piracy”, a treaty has been introduced. In particular, the FAO Treaty on Plant Genetic Resources for Food and Agriculture, which represents the core of the rules of international law addressed to protect biodiversity.

The Treaty was approved in Rome in 2001 after 7 years of intense negotiations, and entered into force on June 29, 2004, ninety days after the official publication of the fortieth ratification, in accordance with the procedures laid down pursuant to art. 29 of the same agreement. The hundredth adhesion (Iran) is of May 5, 2006. And the first session of the governing body of the Treaty was held in Madrid from 12 to 16 June 2006. The objectives of the agreement are the conservation and sustainable use of the “Plant Genetic Resources for Food and Agriculture”: Therefore, any genetic material of plant origin that has an actual or potential value for food and agriculture²¹, especially seeds.

¹⁹ On which see E. SIRSI, *GM Food and Feed*, in L. COSTATO and F. ALBISINNI, *European Food Law cit.*

²⁰ On which see F. BRUNO, *Patents and Vegetable Inventions*, in L. COSTATO and F. ALBISINNI, *European Food Law cit.*

²¹ Art. 2 of the Treaty.

The germplasm until 2001 (the date of the introduction of the Treaty) was regulated on two different levels: a) generally to biogenetic resources was extended the application of the principle of the States permanent sovereignty over their natural resources, as specifically recalled by one of Rio de Janeiro Conventions during the UN Conference of 1992. With this logic, states could grant non-discriminatory access to resources, putting them at risk of extinction or deny their use with damage to social and economic well-being of the entire humanity; b) then there is a specific regime for the wealth of plant genetic material resources²² collected and stored "on site" by the CGIAR centers (including IPGRI). The resources are not owned by the research centers, as their goal is to assure to the general public the research purposes, as these institutions are, in fact, a kind of trust entities. The legal nature of plant genetic material appears to be similar to the concept of "common heritage of mankind" (like, for example, seabed in international waters), with the following characteristics: absence of sovereign powers, supranational system of administration and equitable sharing of benefits. This approach was confirmed in a FAO agreement of 1983, but remained a dead letter (being soft law instrument), as a concept that didn't satisfy anyone: PVS drew no benefit from its own resources, enterprises and research institutions didn't gain recognition for the protection of intellectual property.

With the FAO Treaty of 2001, the key concept, the pivot of the new discipline, becomes the principle of the common interest of all States in the conservation and sustainable use of plant genetic resources: the state has sovereignty over the germplasm, but the formal competence is conditioned (I would say perhaps weakened) by a multilateral management mechanism.

A multilateral system of access and benefit-sharing which covers 35 species of plants essential for food²³ and 29 seeds listed in Annex I to the Treaty, as well as in the near future to all the resources of the CGIAR. States are obliged to ensure easier access to resources within the system and within their respec-

²² Immense wealth of biodiversity: 600,000 samples belonging to 3000 species.

²³ Among which the most important cereals and legumes, but are excluded - for example - soy and tomato.

tive territories, if they are intended by the user to research or production in the food industry.

The transfer of resources takes place through specific contracts (Standard Material Transfer Agreement - SMTA or material transfer agreement-ATM) the content of which is already established by art. 12, or better using the language of our own private law we could say that these contracts have part of their imperative content determined by law, therefore, not negotiable. It could be affirmed that through this mechanism, in the field of germplasm management (and, therefore, biodiversity) is implemented that social control of business activities referred to by their legal literature²⁴, to try to limit the substantial inequality between farmers who buys seeds and the multinational company that sells them. Here, the relationship would be between the territories that provide the resource and businesses that use it.

Returning to the FAO Treaty, in the analysis of article 12, some interesting points concerning the relationship between GMOs and biodiversity can be highlighted. Firstly, paragraph 3, letter *d* states that «the beneficiaries cannot claim any intellectual property right or any other rights that limits the facilitated access to plant genetic resources for food and agriculture, or their genetic parts or components in the form received from the Multilateral System». In other words, the biotechnology company that gets germplasm by the system, cannot claim rights on that same variety, but can do so if genetically modified. So, biotech products both of first (for example modified cereal) and second generation (the food derived or obtained through the modified cereal) are patentable. And is the new DNA (or deoxyribonucleic acid) to be patented. Doubts may arise with regard to the isolation activities, purification and characterization of the gene, frequently used in production processes and in research laboratories. In this case it is the gene, if isolated, to be patentable. It would be legitimate to wonder if the processes of isolation and characterization, provides a different form to the resource, legitimating to patent it under the FAO Treaty.

Another relevant point of the discipline is the obligation to donate to a trust/account an equitable share of the profits. In-

²⁴ CORREA, *Considerations on the Standard Material Transfer Agreement Under the FAO Treaty on Plant Genetic Resources for Food and Agriculture*, in *The Journal of World Intellectual Property*, 2006, 9, 137.

deed, art. 13, paragraph 2, letter. *d*-ii states: «The Contracting Parties agree that the material transfer agreement (ATM or SMTA) ... should contain a provision whereby the beneficiary that is marketing a product which is a plant genetic resource for food and agriculture, and integrates with some material to which the same beneficiary has had access thanks to the multi-lateral system, is required to pay...an equitable share of the benefits arising from the commercialization of that product During its first meeting, the governing body determines the amount, form and manner of the payment in compliance with the commercial practice».

Although not explicitly specified by the norm, this requirement seems to refer also (perhaps especially) to the royalties resulting from the exercise of these rights deriving from biotech patent²⁵ And it is precisely here that the Treaty affects the benefits of intellectual property. Also because, of course, it is not, for example, the corn taken from the system to be subject to commercialization, as the access to the system is limited to research purposes or production (and cannot be the subject to patenting as it is), but is the product obtained from the genetic material to be marketed and thus to trigger the obligation to pay contributions.

Doubts can arise on two other aspects. First, the allocation of resources, which appears to be ambiguous: it delegates the administrative body to establish concretely what it is meant by “fair and equitable sharing of resources”.

Second, the jurisdiction and the law applicable to the agreement of transfer of plant genetic material appears uncertain, as it «has a peculiar legal status because it performs public interest functions that make it a unique instrument, which combines elements pertaining to the sphere of public international law with commercial contract law features. Actually, it operates as an international commercial contract, which creates specific rights and obligations between persons under private law»²⁶.

Article. 12.5 of the Treaty states that «in the event of contractual disputes ... the Contracting Parties shall ensure the pos-

²⁵ For which see F. BRUNO, *Patents and Vegetable Inventions cit.*

²⁶ CHIAROLLA, *Plant Patenting, Benefit Sharing and the Law Applicable to the Food and Agriculture Organisation Standard material Transfer Agreement*, in *The Journal of World Intellectual Property*, 2008, 11, n. 1, 2

sibility of legal action in accordance with the jurisdictional provisions laid down within their legal system». What is meant by “jurisdictional provisions”?

Is it possible, for instance, to provide for an arbitration clause, given that such clause is expressly provided for by the Treaty, as an alternative to appeal to the International Court of Justice, for disputes between States concerning the interpretation and application of the agreement itself? What are the rules applicable to such contracts, especially in light of the norms of private international law²⁷: for example, will it be applied, in case of Italian law, Article 1339 and 1419, paragraph 2 of the Civil Code, which foresee the replacement of the terms (of the Treaty) in place of those made by the parties, namely, the extension of nullity to the entire contract, if it appears that the contractors would not have stipulated it without those clauses? Within what limits the principles of the various jurisdictions apply to protect the weaker party (good faith, duty of care in the execution of the agreement, etc.)?

What are the consequences on the right to exclusive use (patent or limitation) on the product developed from germplasm obtained by a contract afterwards declared invalid? Due to the ambiguity of the wording which results in compromises between adhering States, it is likely that a solution that helps to protect the principles of the Treaty will be found, by any interpretation of the national Courts as to downplay the *ratio* of the agreement: protection of biodiversity in favor of the territories.

5. Food industries as polluters: water discharge and waste management

²⁷ CHIAROLLA, *Plant Patenting, Benefit Sharing and the Law Applicable to the Food and Agriculture Organization Standard material Transfer Agreement* cit., specified that SMTA “operates as an international commercial contract, which creates specific rights and obligations between the parties under private law. This article considers the choice of law clause contained in the SMTA, its reference to the UNIDROIT Principles of International Commercial Contracts and the supplementary use of national law. It concludes that arbitrators may supplement non-national and international standards with substantive law principles of domestic origin only in three narrow exceptions, namely the following cases: (1) national “mandatory” provisions; (2) gaps within applicable non-national and international standards; and (3) additional choice of law clauses inserted by the parties in accordance with article 6.6 of the SMTA”.

In the exercise of their activity, food businesses can pollute the environment. The European legislator has mainly spent its efforts towards introducing rules to protect water from wastes and for waste management.

In reference to the discharge of waste water, the Directive 2000/60/EC of the European Parliament and of the Council (Directive of October 23, 2000, no. 60 "framework for Community action in the field of water policy", in the Official Gazette no. L 327, December 22, 2000) sets the framework for Community action in the field of water, based on an integrated approach to the planning and the management of water resources. This directive replaces and unifies all previous regulations in the field, and indicates a new line of action in order to ensure the protection of the water-based environment, understood as a whole, as part of the Community territory.

The framework directive, therefore, proposes a real quantum leap. It abandons the sectorial perspective and adopts a unified and rather circular approach - that looks at the water cycle in an integrated fashion - in order to ensure it as sustainable, balanced and equitable. Some opinion believe the Directive has created a true "European Water law", which imposes general rules to the member-states, its public authorities, distributors and users²⁸.

With this new integrated perspective, in fact, the water becomes a public good which may influence across the board all human activities (from the government of the territory, to the productive activities, agriculture, tourism, etc.), becoming, then, a real independent variable to be taken into account in all areas, so that it could be defined as an invariant of the economic and social system.

The Directive is based on the principles of precaution, prevention and "polluter pays" (polluter-pays principle); it obliges and requires the protection of inland surface waters, transitional waters, coastal waters and groundwater, especially through a rational use.

²⁸ P. URBANI, *Il recepimento della direttiva comunitaria sulle acque (2000/60): profile istituzionali di un nuovo governo delle acque*, in *Rivista giuridica dell'ambiente*, 2004, 2, 210

A preventive action is favored and the elimination of potential risky situations, with the aim of reducing emissions of hazardous substances up to their elimination, with the help of an adequate system of sanctions.

Member States are called upon to take concrete measures to avoid deterioration of the status of all water and groundwater elements, by prohibiting the introduction into surface and groundwater of pollutants listed in the Annexes to the Directive. The overall objective of the Directive is to achieve "good status" of surface waters by 2015, having, as reference, the international scientific community, ecological, hydrological and chemical-physical parameters and indicators. In Italy, for example, the Directive has now been transposed into the Environmental Code (Legislative Decree. 3 April 2006, n. 152), which provides for the obligation to obtain a permit for those businesses (even food) intending to carry out a discharge of wastewater into a receiving body and specific administrative and criminal sanctions in case of violation of the rules for water protection have also been implemented.

Getting to the regulation of waste, its management, use or abandonment, exposes the natural resources and public health at risk of irreversible consequences or, in any case, hardly opposable. Therefore a binding management of the entire waste chain has been introduced (from production to disposal or recovery)²⁹ which includes any entity producing, possessing or administering any potentially harmful substance or material.

To this purpose is intended a specific authorization system and the peculiar regulation on waste liability "distributed in accordance with the "polluter pays" principle"³⁰: a generalized system of waste management control and regulation of its inherently dangerous activities³¹, in order to prevent or minimize pollution from such activities, and to make sure that management of waste gets exclusively performed by proven professional entities, so that any harmful consequence can be ultimately be imputed to clearly identifiable companies, involved in the entire check-chain.

²⁹Recital 13 of the Directive n. 2006/12.

³⁰ Recital 14 of the Directive.

³¹ Art. 1, par. 1, lett. *d* of the Directive

Each involved company/entity/person in the management of the waste, must act in a binding and subject to controls/check manner, under rules of conduct laid down in National and Community legislation, which expose to possible consequences in case of their violation or breach of the principles mentioned pursuant to art. 191 of TFEU.

Subject-matter of the community regulation and, therefore, national, are all goods and items that can be classified as waste, regardless of their status, their conformation, nature and/or origin.

Main element of the examined regulation and its assumption of operation is the qualification of *waste*, whose attribution to a substance or a material, implies for the holder the acquisition of a legal status, which leads to a series of obligations required for the achievement of the said purposes. Community law (Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 “*on waste and repealing certain Directives*”, art.3.1) defines “waste” any substance or object which the holder discards or intends or is required to discard.

Not being able to dwell herein on the identification of the requirements attributing to a material or substance the *status* of waste (with all the consequences for its holders) we only point out that, to establish the boundaries of the concept of waste and to identify the elements of fact and clues useful for the subsumption of concrete cases, it is necessary to recall and apply the Court of Justice’s judgments on the matter³². Therefore, for example, are considered to fall within such concept not only waste as such from the origin, but also those substances, materials and objects which, even if not yet devoided of economic value and therefore potentially destined for further use, are not suitable to satisfying the needs which they were originally intended for.

The waste may be classified, according to the source, in *urban* and *special* waste and, according to the characteristics, in *dangerous* and *not dangerous*. The origin, in essence, distinguishes the *waste* from production activities, from those that

³² For the analysis of the case law of the Court of Justice on the concept of waste, see A. GERMANO’, E. ROOK BASILE, F. BRUNO and M. BENOZZO, cit. 456 ss.

don't present such peculiarity, while its characteristics imply for greater caution in the management according to the hazard.

In particular, taste, is today, ascribable to the specific identification codes listed in the European Waste Catalogue (EWC) as per the Commission Decision of May 3, 2000 n. 2000/532. In this list is made a distinction between hazardous waste (which can never be domestic), from non-hazardous, pinpointed by an asterisk, as indicated on the basis of additional annexes G, H and I.

The category of hazardous waste presents hazardous waste *per se*, by nature, and those that are not so by nature, but that it may become dangerous for the percentage of concentration of substances actually present in their composition. In the latter case, in the list of wastes, the hazardous ones are placed alongside those that are not dangerous, as "mirror entries", which have the ability to assume one or the other feature.

Is of doubt though, if such list would or would not be of peremptory nature³³, especially since the Member States can always decide that a specific waste, even if not included in this list, can always be subject to the rules provided for hazardous waste, if they deem that the substances in it contained, are such that they represent a risk even at lower concentration. The decision, however, must pass the scrutiny of the Commission, which will provide for an amendment to the list of hazardous wastes, and those that are not considered as such.

³³ On the subject, see Court of Justice, 20th June 2000, cause C-183/98, *Pavlov*.