



## ORIGINAL PAPER

# Precautionary Principle - too Vague to be a Viable Policy?

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### Abstract

In every aspect of our lives risks we face are a basic condition of our existence. Along the time, humanity has tried to limit as much as possible any damage done to humans, goods or the environment. There were different approaches and theories, based on multiple factors from legal to economic and political ones. With the development of mankind and the emergence of new social relations, theories of liability based on the facts and risks had to be adjusted. Thus arose various forms of liability based on different foundations. Regardless of social relationships, be they civil or environmental protection relations, constant concern was to find a common basis for determining when the responsibility intervenes. No matter how seductive it may seem the precautionary principle, its application as an absolute principle regarding basis of liability may lead to confusion and problems, turning it into a concept too vague to be useful.

**Keywords:** *environmental principles, precautionary principle, risk management, pre-damage control, post-damage control, liability*

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### Introduction

Human society is developing rapidly, all over the world industrial, technological and economic development has created wealth and opportunity. This technological development is providing important benefits for the environment and health of the population. For example, "energy supply, water and waste-treatment systems, modern housing, transport, modern food production and distribution systems, immunization, pest control and telecommunication are playing important roles in improving health and the quality of life and also are contributing to increase of life expectancy and protection of the environment"(Martuzzi and Tickner, 2004: 7).

But all this came with a cost as "technological development has often outpaced scientific knowledge related to the determinants of environment and population health" (Martuzzi and Tickner, 2004: V). The complex organization of society generates multiple ways through which a variety of factors can affect health and the environment. These include: physical risk factors - like radiation, toxic chemical substances and other dangerous materials -, social risk factors – like the refusal or privation of clean natural resources by limiting the access. The resolutions reached in certain domains that seem to have nothing in particular with the environment or with people's health, can sometimes influence the environment due to the great number of relations and exchanges in modern society. The function of extreme complex systems has to lead to a healthy environment, but these systems can be unintentionally disrupted, causing negative and irreversible repercussions to people's health. As a cause of the impact generated by the growing population, the intensive agriculture, industrialization, the environment was not able to heal by itself, so we have to help in his restauration.

Because of this measures had to be taken to assure that our newly stated right to a healthy environment is respected (Ilie, 2016: 18). Especially in the 20th and 21th centuries we have generated an ever-expanding diversity of situations, circumstances and agents whose effects are in most cases mainly unexplored or unidentified yet, very challenging to foresee and capable of doing permanent damage to environment's health. Of course, human life is, has always been, and will always be full of risks and an urge to deal with the risks we face is a basic condition of our everyday existence. For example, workers on a construction site wear protection helmets and equipment not because they expect accidents to happen, but because they know that it would be irrational not to be prepared for the potential dangers that they face on their work site. We base our everyday decisions for avoiding risks and dangers that might occur on common knowledge or on scientific information when it comes to more complex problems. Problems regarding the environment are one of the most important social issues that are based on scientific information. Scientists and politicians all agree upon the significance of science in environmental policy debates – one of the only things they agree upon about the health of the environment.

When or if substantial science is accessible, the environment and the health of population can be preserved through *preventive action*, but we must comprehend that science itself has its limits. The complexity of the modern world and development and progress of science had in most cases unforeseen consequences that we have to prepare for and deal with them. Because of this, it was needed something even versatile and complex than prevention, something with a potential to face all the problems that arise in today's society. It was essential the reconciliation between the need to innovate and develop with the need to protect human health from environmental risks. So, the idea of a

precautionary principle was born. The precautionary principle encourages policies that protect human health and the environment in the face of uncertain risks (Kriebel, Tickner, Epstein, Lemons, Levins, Loechler, Quinn, Rudel, Schettler, and Stoto, 2001: 872). Actually, in this broad sense it is not even a new concept and maybe some may even object at giving it a new name, because there are a lot of same ideas that go by using different names in other disciplines. For example, public health practitioners use the term *primary prevention* to mean much the same thing. As stated in doctrine, "the physician's obligation to first do no harm is nothing more of a precautionary approach when treating a sick person. Also, the governments of several Scandinavian countries have made regulatory decisions about electromagnetic fields and other hazards using a concept called *prudent avoidance*, which is also similar<sup>1</sup>" (Kriebel, Tickner and al., 2001: 871). In România, courts had stated their judgements when dealing with electromagnetic pollution using this principle. In U.S. although the precautionary principle it's not accepted in its broad sense, it's used instead the idea of *precautionary approach*. The main advantage of the term *precautionary principle* is that it provides an overarching framework that links environmental sciences and public health.

The precautionary principle states that, "in cases of serious or irreversible threats to the health of humans or ecosystems, acknowledged scientific uncertainty should not be used as a reason to postpone preventive measures" (Martuzzi and Tickner, 2004: 7).

There are two widely accepted definitions of this principle. One is stated by in the Rio Declaration from the 1992 United Nations Conference on Environment and Development (Agenda 21). The declaration stated: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation." The second one comes from 1998 Wingspread Statement on the Precautionary Principle<sup>2</sup> and it states: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action. In this context the proponent of an activity, rather than the public, should bear the burden of proof." It's clear that the principle was intended to be used as a response to those cases when science don't have a fully foresight of the consequences of certain actions and to increase political responsibility in order to avoid or, at least, limit damage to the environment and humans.

### **History of the precautionary principle**

The evolution of this principle in the last 30 years is meteoric. Appearing in the early 80s, in a relatively short time it managed to have a word to say both in international and in community law and to some extent in national law systems of the developed countries. Its rise began in international law in the field of marine pollution, first time at a conference on the protection of the North Sea against pollution<sup>3</sup>, where participating countries have found the need to apply the precautionary principle to prevent discharges of hazardous substances in the North Sea. At the end of the 9th decade, at several international conventions on the protection of the marine environment and waterways<sup>4</sup>, (London, Helsinki, Paris), the precautionary principle was stated, without being formulated and defined in a satisfactorily way.

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The first time when it was defined as a legal discretionary instrument, was at the United Nations Conference on Environment & Development in Rio de Janeiro in the statement of 13 June 1992, where at principle 15, as we stated the before, is declared: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation". In this way the precautionary principle was given a general size, being applicable to all forms of pollution.

Following this conference, it was taken over in many international documents on environmental protection, some authors considering it already as having a character of custom<sup>5</sup> and others integrating it in the so-called "soft-law" (de Sadeleer, 1999: 139 and next). Despite the innovations and potential application, international jurisprudence has refused to apply the principle. For example, the International Hague Court of Justice, in a dispute between Hungary and Czechoslovakia on the construction of a dam at Gabčíkovo on the Danube, motivates that "danger evoked would intervene on a long term and is uncertain [...] No matter how serious [...] it cannot be considered certain enough and, as such, imminent"<sup>6</sup>. Also the European Court of Human Rights, in 1997, related to a complaint against Swiss Federal Council regarding the extension of activity of a nuclear plant, believes that "plaintiffs have not established a direct link between the operating conditions of the plant and the right to protection of their physical integrity ... there were no indications of a danger not only serious but also specific and imminent" (de Sadeleer, 1999: 43-45). Not least, the World Trade Organization, through the judiciary committee, said that the European Union cannot use the precautionary principle to justify its refusal to import meat on the pretext that the slaughtered animals were administrated hormones, as the risk to health is not identifiable, although this principle is mentioned in two complementary agreements, the agreement TBT (Technical Barriers to Trade) and SPS agreement (Sanitary and phytosanitary Systems) which stand alongside the Treaty of Marrakesh in 1994 by which the Organization was founded<sup>7</sup>.

In European law, the precautionary principle was included in European primary legislation only by the Maastricht Treaty in 1992, by Article 174. 2 (previously 130 R's. 2) which stipulates that "the precautionary and preventive action principle, the principle of rectifying with priority the damage to the environment at source and the polluter pays principle form the basis of Community environmental policy." Although it appears in the Treaty, the references made by the Community's positive law are somewhat limited on human and environmental risk assessment of hazardous substances<sup>8</sup>, especially those of biotechnology (use of genetically modified micro-organisms). Given the fact that the German company Bayer bought for 66 billion US\$ giant Monsanto<sup>9</sup>, which until April 2016 was the world leader in production of genetically modified organisms, it is clear that the impact on the market, through economic and commercial view, will be an unprecedented one, the production (sometimes very vehemently disputed) of Monsanto will become an European production in the near future and possibly without tariff barriers marketed throughout the EU. In 1997, the European Commission's Green Paper on the general principles of EU food law mentions the precautionary principle as a fundamental principle of action in case of scientific uncertainty. Also, it should not be forgotten the resolution on precautionary principle adopted by the European Council of Nice, which recommends Member States to translate it into deeds. The problem with these resolutions, recommendations and communications is that they are not mandatory provisions of law, being part of the so-called "soft law" and in need of practical implementation.

Regarding the jurisprudence of the Court of Justice of the European Union (CJEU) this is in favor of the precautionary principle, which is invoked in several cases. Thus, in a case from 1990, where the plaintiff brought scientific evidence on the innocuousness<sup>10</sup> for health of 5 hormones banned by a Directive of the Commission, the CJEU confirmed directly that Directive: "because a precautionary measure cannot be based only on scientific data"<sup>11</sup>. In the case of the "mad cow" disease (Creutzfeld - Jacob), given that the most likely cause is bovine spongiform encephalopathy, CJEU, invoking and using the precautionary principle, confirms the decision of the Commission prohibiting the export of meat from cows, the demonstration on the decision being founded on art. 174 of the Treaty: "because the policy of health protection based on the precautionary principle is essential"<sup>12</sup>. Also, CJEU condemns Spain in the decision "Marismas de Santona" because it did not ensure the preservation of wetlands important for migratory birds, thus not complying with Directive 79/409 EEC on the protection of migratory birds. The justification was based on the uncertainty induced by the disappearance of a natural habitat, which could cause a decline in the number of birds reported to invoke the precautionary principle, the CJEU thus rejecting the arguments of Spain which claimed that there was not any noticeable decrease in their number.

The precautionary principle is reflected in the national laws of European countries, its impact being different, however. Its basics were laid in German law in the early 70s from the German principle of *Vorsorge*, or *foresight*. The basic idea of this principle was that society has to find a way to mitigate environmental damage by thoroughly planning for the future in order to hinder any activity that can prove harmful. "The Vorsorgeprinzip developed into a fundamental principle of German environmental law (balanced by principles of economic viability) and since has been invoked to justify the implementation of strong policies to combat pollution as acid rain, global warming, and North Sea pollution" (as we mentioned before) (Tickner, Raffensperger and Myers, 2003: 2). Also it has led to the development of a strong environmental industry in that country and a careful planning of activities with environmental impact. As examples, the German Constitutional Court ruled that the indeterminate notion of precaution and the stage of development of science and technology in order to apply the principle, must be evaluated by the executive and not the judiciary. Operating Permits may be granted only after science demonstrates that it is practically impossible to produce any damage. They should be refused when there are doubts that "necessary caution cannot be limited to what is feasible from a technical standpoint" (de Sadeleer, 1999: 154). Furthermore, the practice of courts in nuclear energy field was based on the idea that "because science is not omniscient, the precautionary principle should apply to possible damage that are not yet a danger, but for the principle to not be invoked, the danger and risk must be virtually excluded" (de Sadeleer 1999, 156).

In France, the 1995 Barnier law<sup>13</sup> stipulates that "The absence of certainty in the light of current scientific and technical knowledge should not delay the adoption of effective and proportionate measures to prevent the risk of serious and irreversible damage to the environment at an economically acceptable cost". The Environment Chart of 2004, which is a part of the French Constitution, amended this contain again, giving it a significantly different meaning: public authorities are the only ones able to apply the precautionary principle which has become a principle of action and not inaction: in the face of uncertainty, research programs must be developed to remove doubt. Science therefore remains a response and cannot be hindered in the name of the status quo.

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English law which is based on case law and judicial precedent is reluctant to legal principles and teleological interpretations. Thus, British courts have rejected the precautionary principle, relied on by the applicants on the basis of a decision of the ECJ interpreting in a manner *sui generis*, in the spirit of common law, challenging the decision of the Court of Justice and the applicability of art. 174. 2 TEU<sup>14</sup>.

Likewise, American law and American authorities constantly declare themselves against the inclusion of the precautionary principle in international conventions and promote instead a so-called *precautionary approach*. However, at national level, US federal jurisdictions gave favorable decision to the US Agency for Environmental Protection Agency (EPA), on the grounds that the law and common sense (concept interpreted in the spirit of Common Law) "requires regulation to prevent the risk even when the author of the norm does not have the certitude that the risk is inevitable - because waiting for certainty would lead to the adoption of curative regulations, not preventive ones"(Teleagă, 2004: 37; de Sadeleer 1999: 165). As example, for species threatened with extinction, there is a special legislation under which the precautionary principle, without being named, is used skillfully (Endangered Species Act). Moreover, the principle is applied in terms of air pollution (Clean Air Act). The attitude of US authorities who have defended major commercial interests in different fields (like that of GMO) must be nevertheless understood.

In Romania, the precautionary principle is reflected in the legislation, being expressly stated in G.E.O. no. 195/2005 (as it was adopted and amended later) in Article 3, letter b as "the precautionary principle in decision-making," - the decision-making is only permitted to: environmental protection authorities; central and local government (when operates in connection with environmental protection); by legal and natural persons performing economic and social activities in this area. Also, the principle appears in Government Emergency Ordinance no. 68/2007 on environmental liability with regard to the prevention and remedying of environmental damage, which provides in Art. 10 and 14 that the operator is obliged to take immediate steps, taking into account the precautionary principle in decision making. In practice, we can mention a judicial sentence<sup>15</sup>, where in a case concerning electromagnetic pollution with GSM antennas, the court going in the plaintiffs' favor, shows that "as long as it has not been established with any degree of certainty, that the GSM antennas have no harmful effect on life and health of a person that usually lives near these devices, the applicant must benefit of precautionary principle, established by art. 174 of the Treaty on European Community (formerly Article 130R of the Treaty of Maastricht) that would mean that, in the absence of reliable data on long-term consequences of exposure to electromagnetic fields, authorities must protect with priority the individual against potential risks"<sup>16</sup>.

### Components of precaution

"Precautionary Principle" has an important part to play when it's needed to know what developmental activity is sustainable or not. "Precautionary principle" is a strong starting point for sustainable development that/which is different from non-controlled development by the fact it's expected that the developmental processes has to be stopped and blocked if they can generate severe and permanent damage to the ecosystems and human health.

Basically, the Precautionary Principle marks a shift in the international environmental thinking and jurisprudence from *Assimilative capacity principle* to *Precautionary Principle*.

*Assimilative capacity principle* it's the starting point of earlier legal measures to protect the environment and this concept was recognized at the international level even before the Stockholm Conference (1972). The main fundament of this concept is that the natural environment has the capability to absorb the ill-effects of the pollution, but only to a certain limit and beyond this the pollution may cause damage to the environment and so requiring efforts to repair it. Principle 6 of the Stockholm Declaration contains assimilative capacity precept stating that "Pollution must not exceed the environment's capacity to clean itself". This lays the foundation of the idea that science will be able to grant all the crucial information and mechanisms for everyone who's interested to avoid the advance beyond proper, established usual limits upon the capacity of the environment to assimilate effects of the activities. It's also presumed that with proper technical expertise there will be plentiful time for action to limit/avoid the damage if such environmental damage is predicted.

The shift to the approach to environmental protection from assimilative capacity principle to precautionary principle began after 1972. "Precautionary Principle is a principle which ensures that a substance or activity posing a threat to the environment is prevented from adversely affecting it, even if there is no conclusive scientific proof lining that particular substance or activity to the environmental damage." The main idea is that science it's not omniscient and it can't resolve difficult and complex issues over cause and effect every time. So "a decision for further study or not to do anything in the face of uncertainty is a policy decision not a scientific one just as taking preventive action would be (Sahu, 2013: 2)."

As stated in doctrine, "a precautionary approach to environmental and public health decision-making includes these specific components: taking precautionary action before scientific certainty of cause and effect; setting goals; seeking out and evaluating alternatives; shifting burdens of proof; developing democratic and thorough decision-making criteria and methods." (Tickner, Raffensperger and Myers, 2003: 4).

Taking precautionary action before scientific certainty of cause and effect. This should provide an instrument of responsibility for preventing damage to the environment by imposing general duties/obligations to behave in a determined way even there is an absence of explicit laws. The role of this principle is to provide a certain mechanism that should provide accountability. Beyond this, laws should regulate certain actions with potential impact over environment, by imposing certain regulatory acts for those who conducts activities potentially hazardous to environment (Ilie, 2010: 115).

*Setting goals.* Risk assessment is calculated on forthcoming scenarios, but this analyses may be afflicted by errors and preconception. By the contrast, the precautionary principle stimulate anticipative thinking based on precise objectives that had to be achieved.

*Seeking out and evaluating alternatives.* The advantage of precautionary principle over risk assessment is that follows reducing or eliminating the hazard rather than seeking what level of contamination is safe or economically optimal.

*Shifting burdens of proof.* Traditionally, burden of proof is bore by those who seek to demonstrate something. In the legal systems, those who claim that they are affected have to prove this, but with precautionary principle this is shifted and promoters of an activity has to demonstrate that their activity will not cause excessive and inappropriate

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damage to population and environment, because in this case it has to be responsible those who have the authority, power and assets and not those who don't have the power or access and resources and are affected by things beyond their control. This responsibility can be split into several components: *Financial responsibility*. Regulations alone are not likely enough to encourage precautionary behavior on the part of governments or those who conduct activities that poses potential threats to natural environment and/or human health. However, assurance bonds for the worst possible consequences of an activity or liability for damages, will encourage companies to think about how to prevent impacts. *The duty to monitor, understand, investigate, inform, and act*. This activities are already part of Romanian legislation in the G.E.O. no. 68/2007 regarding objective liability for environmental damages. Those undertaking potentially harmful activities are required to routinely monitor their impacts, inform the public and authorities when a potential impact is found, and act upon that knowledge. In this way the law has excluded any way of postponing the actions needed to prevent harm.

It's necessary to *develop democratic and thorough decision-making criteria and methods*. When precautionary decisions regarding an activity or project are taken, due to the fact that sensible debates and conclusions regarding causality and effects are, at base, policy decisions, population has to be a part of the decision process and those can't be just discretionary decisions of an authority. This is also happening in Romanian legislation, where the public participation to decision making it's mandatory for most activities with environmental impact (Ilie, 2016: 20).

*Regulating civil objective liability for not respecting this principle*. Precautionary principle can be applied in two steps. First, together with *prevention principle* as a method of avoiding damages to environment by careful planning and setting goals and, secondly, if a damage has occurred, as a base for liability. The main advantage of this came from the fact that the civil liability will be objective as there's no need to prove the guilt of those culpable of damaging the environment or affecting the health of people.

Each way of protecting the environment is based on one of those procedures: *risk assessment* or *the precautionary principle*. Risk assessment was the first to come, during the 1970s, together with cost-benefit analysis as tools needed to reconcile uncertain science and the political need for decision-making to limit harm. They were heavily based on the ability of science to model and predict harm in extremely complex ecological and human systems, having as fundament the idea that decisions has to be made on the basis of what can be quantified, ignoring what is unknown or cannot be measured.

As was stated in doctrine (Tickner, Raffensperger and Myers, 2003: 16-18), unfortunately, in most cases, risk assessment is based on assumptions and flaws that limit its ability to deliver a safe and secure solution to potential environmental problems:

*Risk assessment assumes "assimilative capacity"*, that humans and the environment can render a certain amount of pollution without significant harm and so it's used to manage and reduce risks, not prevent them, denying even the most basic efforts to institute clean production.

*Risk assessment focuses on quantifying and analyzing problems rather than solving them*. It asks how much pollution is safe or acceptable and how to live with it instead of preventing harmful exposures and to move toward safer and cleaner alternatives.

*Risk assessments are susceptible to model uncertainty and is costly and time-consuming*. Risk assessment is based on interpretation, assumptions and, so because those, no matter what, still have subjective and arbitrary elements the results can be highly



variable. Also a complete and responsible risk assessment can take years to complete and even then has analyzed several problems with solutions only to limit the harm, not to avoid it.

*Risk assessment alone is fundamentally undemocratic.* In the beginning, risk assessment didn't include public opinions, perceptions, priorities or needs. Since then some efforts have been made to involve the public in risk-assessment processes (for example, in Romanian legislation public participation and opinion is mandatory for regulatory acts) (Bischin, 2008: 80-83, Ilie, 2016: 19-21), but this is still wrong because in most cases public is asked how much exposure or harm is acceptable to them, not if they agree and its opposition is usually ignored as unacceptable. The risk-assessment processes and studies are conducted by specialized persons, but the public it's not supported and encouraged to come with their own studies or alternatives and so, in most cases, their opinion it's unscientific and based on assumption so it's dismissed from the start.

*Risk assessment puts responsibility in the wrong place.* Its basic idea that society as a whole must deal with environmental harm in order to develop is also wrong, because it made acceptable and legal the responsibility for harm and those who created it will not suffer any legal consequences.

*Risk assessment poses a false dichotomy between economic development and environmental protection.* Until recent years it seemed that there is no coexistence between economic development and environmental protection and we "have to sacrifice" one for another. Since the principle of sustainable development has taken firm roots, this started to change, linking social and economic policies with environmental ones. The problem is that sustainable development can be an abstract concept sometimes as opposed to scientific research than can support certain actions. What is lost from sight is that in most cases over-regulating can be more costly in the long run, because assimilative capacity actions will have to deal also with subsequent clean-up and health costs.

Beside those criticisms, risk assessment can play a role in implementing the precautionary principle, by changing its role from establishing "safe" levels of exposure and harm to a tool used to better understand the hazards of an activity and to compare options for prevention. It also has to be used in conjunction with democratic decision-making methods, because the basis of policy and decision-making must be precaution and prevention, rather than risk (as is stated in Romanian legislation, for example).

## **Conclusions**

Through our analysis we tried to prove that the Precautionary Principle can be a tool for making better health and environmental decisions. It's based on the idea that protective action must be taken before there is a scientific proof of a risk. Lack of full scientific information should not be seen as an excuse to take action, but it should be acted in such way that we must be sure that our impact over environment and human health is minimum. The precautionary principle is not a vague and abstract notion, quite the contrary, it can be used as a mean to mitigate the environmental hazards in the first step and secondly, if a harm is done, to be a justification for every liability that is to be asked. Risk assessment can be used to predict the consequences, but it's costly, time consuming and it can't cover all the variables when complex and new technologies are used. Also, by comparing short-term benefits brought by an aggressive economic and social development, we fail to see the long term consequences of or actions and this can be avoided by setting goals and not accepting that a certain level of pollution is harmless to

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the environment. Also, precautionary principle can be used as an effective mean to point responsibility at those who act without it and not to be shared with everyone to a point where none is guilty. Because of its potential impact, the population, as the Romanian legislation states, is to be a part in the process of environmental decisions, but the state should support population in a firmer way by helping them conducting their own studies and accepting their opinions even if they are based on goals not on scientific studies. This is not more idealistic and vague as the concept of sustainable development, where social, economic and environmental policies coexist to ensure we have a balanced evolution in a clean and healthy environment.

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<sup>1</sup> For more details on the matter see also: WHO (World Health Organisation) (2000). *Electromagnetic Fields and Public Health Cautionary Policies*, Geneva: World Health Organization. Retrieved from: [http://www.who.int/docstore/peh-emf/publications/facts\\_press/EMF-Precaution.htm](http://www.who.int/docstore/peh-emf/publications/facts_press/EMF-Precaution.htm); Aasen S., Johnsson A., Bratlid D., Christensen T. (1996). Fifty-Hertz magnetic field exposures of premature infants in a neonatal intensive care unit. *Biol Neonate*, 70, 249-264.

<sup>2</sup> The Wingspread Conference on the Precautionary Principle was a three-day academic conference where the precautionary principle was defined. It took place in January 23-26, 1998 at Wingspread, in Racine, Wisconsin, and involved 35 scientists, lawyers, policy makers and environmentalists from the United States, Canada and Europe.

<sup>3</sup> The Agreement for cooperation in dealing with pollution of the North Sea by oil and other harmful substances (the Bonn Agreement) was signed in Bonn, Germany on June 9, 1969.

<sup>4</sup> As example: Convention on the Protection and Sustainable Use of the Danube of 29 June 1994, evoking the precautionary principle in order to preserve water quality.

<sup>5</sup> Custom can exist outside the law, it can become binding law and can replace its gaps. In this case it does not conflict with the law. See Laroumet, C. (1995). *Droit civil, Introduction à l'étude du droit civil*, Paris: Economica, 1995, 183.

<sup>6</sup> The Decision of Hague International Court of Justice (ICJ) from september 25, 1997, *Hongrie contre Slovaquie* quoted by N. de Sadeleer, *cited work*, p. 143.

<sup>7</sup> „La perspective Communautaire du principe de Précaution“, art. quoted by N. de Sadeleer, p. 449, *Revue du Marché Commun et de l'Union Européenne*, No. 450.

<sup>8</sup> Directive 93/67 EEC and 15 Directive 90/219 EEC states that the more stringent protective measures to be applied in the absence of convincing evidence that less stringent measures are sufficient.

<sup>9</sup> Monsanto owned, at firm merger agreement, 30% of the GMO world market, with 1,700 patents, with turnover of \$ 15 billion and a net profit of 2.31 billion \$ annually in 2015, with a presence in major markets Brazil, Argentina, India, China, Philippines, Canada and Mexico, and in Europe in Spain, Portugal, Bulgaria, Malta, Ireland. In Romania, from 2013 has a processing plant and seed conditioning in the locality Sinești, jud. Ialomița, 30 km from Bucharest, being the largest processing unit of Americans in Europe.

<sup>10</sup> Innocuity: Attribute of a physical chemical or biological agent to not constitute a danger to the body.

<sup>11</sup> CJEU decision from November 13, 1990, Fedesa aff. C-331/88 rec. I-4023

<sup>12</sup> CJEU decision from July 1, 1996 Royaume Uni c. Commission, aff. C 180/96 (see note N. de Sadeleer, op. cit. p. 146)

<sup>13</sup> The law no. 95-101 from February 2, 1995 on strengthening the protection of the environment

<sup>14</sup> Duddridge Case: a high voltage electric cable buried near a school and presenting a risk of leukemia.

<sup>15</sup> Civil Sentence no. 8164 from June 24, 2009, given in Case no. 17703/299/2008, Judecătoria (First degree court) Sector 1, București.

<sup>16</sup> Sentence quoted and analyzed by Dușcă, A. I. (2014), *Dreptul Mediului*, second edition, Bucharest: Universul Juridic (2014), p. 248.

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