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THE PRECAUTIONARY PRINCIPLE IN THE BRAZILIAN ENVIRONMENTAL LAW

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ABSTRACT

The problem to be addressed in this article is related to the precautionary principle and its incorporation into the Brazilian law. As it is beknown, this principle has been widely cited by Brazilian case law and it is an important part of the legal and environmental scholarly production. However, it follows that its application has been made fairly randomly, and even so there is no clear and operational definition of its content. The hypothesis being examined is that since the Rio Declaration's - in its translation into Portuguese - environmental legislation has termed as legal principle, which internationally is an approach, a precautionary measure, as can be seen in both the texts in English and French of the Rio Declaration and other relevant legal instruments. The methodology to be used is the research of the case law and relevant legal rules, as well as the examination of the scholarly production on the subject. As a result, the conclusion is that there is an overuse of the precautionary principle by the Brazilian courts, especially by the Superior Court of Justice and that, in this case, the Federal Supreme Court has played a moderating role in relation to the application of the precautionary principle.

Keywords: Environmental Law; Legal principles; Precautionary Principle; Environmental policy; Federal Supreme Court; Case Law.

O PRINCÍPIO DA PRECAUÇÃO NO DIREITO AMBIENTAL BRASILEIRO

RESUMO

O problema a ser enfrentado por este artigo é relativo ao princípio da precaução e sua incorporação ao Direito brasileiro. Como se sabe, tal princípio tem sido amplamente citado por decisões judiciais e é parte importante da produção doutrinária jurídico-ambiental. Contudo, tem-se que a sua aplicação tem sido feita de forma bastante aleatório e, inclusive, não há uma há uma definição clara e instrumental de seu conteúdo. A hipótese que se pretende examinar é que, desde a Declaração do Rio – em sua tradução para o Português – a legislação ambiental tem denominado como princípio jurídico, o que internacionalmente é uma abordagem, uma medida de precaução, como se pode constatar pelos textos em Inglês e Francês da Declaração do Rio e de outros instrumentos jurídicos relevantes. A metodologia a ser utilizada é o levantamento de decisões judiciais e normas legais relevantes, bem como o exame da produção doutrinária relativa ao tema. Conclui-se que há um superdimensionamento da utilização do princípio da precaução pelos tribunais brasileiros, em especial pelo Superior Tribunal de Justiça e que, no caso concreto, o Supremo Tribunal Federal tem desempenhado um papel de moderador em relação à aplicação do princípio da precaução.

Palavras-chave: *Direito Ambiental; Princípios legais; Princípio da precaução; Política ambiental; Supremo Tribunal Federal; Precedentes Judiciais.*

INTRODUCTION

This article aims at demonstrating how the precautionary principle ("PP") was incorporated into the Brazilian law, initially through documents of international public law and, later on, through its explicit adoption by national laws and, finally, how it has been interpreted by the Judiciary Branch with an emphasis on the Federal Supreme Court ("STF").

It is interesting to see that, since the Conference of the United Nations on Environment and Development ("Rio 92"), the Brazilian state has adhered to the PP although, surprisingly, the Executive Branch, through its environmental control and risk assessment agencies, has not been able to set directives and guidelines for its application to concrete cases as an environmental policy measure. Due to the lack of guidelines, the PP – in its current application in Brazil – is a diffuse and unclear concept that generates insecurities and uncertainties, which are inconsistent with an instrument that should be able to help decision making by the public power. That has led the Judiciary to develop conceptions on the PP that not always have a relationship with the genesis and the international understanding over the subject. As we are demonstrating in the article, the PP has been excessively called upon by judicial decision, a few times in issues regarding scientific uncertainties and it is on its way to vulgarization.

One of the great difficulties regarding PP derives from the fact that legal principles (general principles of law) reflect a consolidated legal tradition that is called to offer solutions to concrete hypothesis regarding which the existing rules are omissive and that has been used since the ancient Roman jurisprudence (GUSMÃO, 1997). Thus, a "new principle", poorly defined, prematurely given *constitutional status* – as it is possible to understand from different decisions issued by the STF -, spreads throughout the Brazilian environmental legal order, requiring suitable understanding from its interpreters under the penalty of changing into an instrument of *non- environmental policy*, a general negative for the practice of activities and research at the frontier of knowledge. As it is going to be examined, due to the instrumental characteristic of the PP, the best way to define it is through negative, that is, *setting forth what it is not*. As this paper expects to be able to demonstrate, it is necessary to set forth clear administrative guidelines as how and under what circumstances the PP is to be applied as an instrument of risk management, under the penalty of building a principle that is excessively casuistry, legally built and, thus, unable to

express broader environmental policies. The tendency of the Judiciary to occupy political spaces due to the inactivity of the Executive and the Legislative is also reflected here, having the consequence of transferring to the Judiciary the decisions regarding the implementation of environmental policies, especially in what regards permitting of pollutant activities.

The article starts with a short discussion over the role of the principles in the Brazilian law, calling the attention to the PP and its concrete application. It starts from the assumption that there is a contradiction between principle and innovation, as principles, in general, express consolidated legal traditions and not novelties. On the other hand, as seen later, invoking the PP is based on an increasing social state of mind that is mainly influenced by the so called ecological crisis that almost identifies the current times as the antechamber of apocalypse. It is probably more suitable to resort to *prudence* – an Aristotelian concept – to decide issues that involve risks produced by interventions to the environment that have registered histories made by technologies and methods that are already known and whose past experience indicates options to be chosen.

Then, it is time to go to the examination of the meaning of PP in international law – in which the legal status is not the one of legal principle (mandatory, explicit), but simply the one of "precautionary approach" or "mesures de précaution". As to be analyzed, a mistaken translation of the Declaration of Rio is attributing a level of positivity to the PP in the Brazilian law that has no equivalence at the international level.

Finally, it was possible to see that the STF has been trying to set forth an operational criterion for the application of the PP, having progressed in its conception that, in the first decision mentioned in the article, it was still strongly influenced by the ecologic Zeitgeist. The article is closed with the conclusion that the decisions issued by the STF should serve as a guide to Brazilian courts – including the Superior Court of Justice – that should restrict the application of the PP to the cases that actually involve scientific uncertainty.

1 THE PRINCIPLES IN THE BRAZILIAN LAW: THE PRECAUTIONARY PRINCIPLE

The law that introduces the standards in the Brazilian Law[1] establishes in article 4 that before the legislative omission, the judge has to

1 Decree-law n. 4.657, dated September 4, 1942.

decide according to "the analogy, the customs and the general principles of law." The new code of civil procedures[2], although failing to expressly mention the general principles of law, establishes in article 140 that "the judge is not excused to decide under the statement of gap or obscurity of the legal order", an evidence that the principles are an integrating part of the legal order. Thus, the general principles of law are the last resource to be used by the enforcer of the law in order to solve a concrete case. It has been recognized that the legal principles have always played an important role in the legal order that is to add coherence, unity and harmony to the system, serving as a *guide to the interpreter*. It is acknowledged that, contemporarily, constitutionalism and the new hermeneutics have recognized their full normativeness, equivalent to the legal standard (PADILHA. 2010, p. 238) as admitted in the legal environmental doctrine.

However, even in the environmental doctrine, there are some who currently identify an hypertrophy of principles in the "environmental field" such as SARLET and FENSTERSEIFER (2014, p. 18), who say that the subject inspires care because, as seen in other "sensitive fields", there are excessive "fundamentalist profiles", which causes "a dose of voluntarism that tries to legitimate by means of generic invocation -, and, sometimes, even *pamphleteering* – of the discourse of principles". What is understood by a pamphletary use of the principles the search for solutions for concrete cases so as to invalidate the economic activity or deny efficiency to administrative acts issued by environmental agencies. One may say that *principism* is the childhood illness of environmental law once it always looks for the most radical position as if it was, for itself, a synonym of more legitimacy and legality or even more efficiency for environmental protection.

PP is not immune to a "generic invocation" and even "pamphletary" that also reflects on legal decisions. On the contrary, a set of circumstances to be examined ahead tends to change the PP into a scarecrow taking care of future generations' green gardens" (STJ, AgRg no REsp 1356449 / TO) and trying to avoid "catastrophes", avoiding its rational use as an instrument of environmental policy and risk management. In fact, the Superior Court of Justice, for example, understands that the existence of risk, regardless its dimension, is enough for the application of the PP. In a recent decision, the high Court decided that the defendant should demonstrate that his/her activity would not generate risks for fishermen, not qualifying the amount

2 Law n. 13.105, dated March 16, 2015.

of risk once, as known, there is no zero risk (STJ, AgRg no AREsp 183202 / SP).

The PP has been greeted as an innovative legal principle that was almost unknown by the 1990's, when it got popular with the episode of the "mad cow" (EWALD; GOLLIER; SADELER, 2008) in Europe with application in public health issues. Contemporarily, the PP is invoked in the most different issues that go from climate changes, consumer protection, public health, terrorist attacks and many others. The reach of the principle is so comprehensive that it has even been called "disturbing" (BRONNER; GÉHIN, 2010).

The immeasurable expansion of the precautionary principle[3] and its conceptual indetermination are elements that disrupt the legal order, that is, exactly the opposite of what is expected from a legal principle. It is disruptive because its application is randomized and, thus, it is an instrument that cannot be used for decision making when the administrator faces a situation of scientific uncertainty, but to the contrary – as its Brazilian practice demonstrates -, it changed into a mechanism of administrative palsy and an obstacle for the development of scientific knowledge.

An example of that randomness can be easily identified in a decision that favored the application of the *precautionary principle*, granting advance protection to avoid that a "standard having the possibility to be declared unconstitutional" has a validity and may be used as an instrument of authorization for irregular constructions (TJ-DF, AGI: 20150020141034). How can the precautionary principle be used to avoid the validity (?) of a standard "with the possibility to be declared unconstitutional"?

The fear – justifiable or not – has become one of the most influential components of the modern social life, with visible effects of a fact that creates a right (SUNSTEIN, 2005). The amplification by the media of tragedies, crimes, social and economic difficulties has the average citizen think he/she is in a worst world than the "golden days of the past", an "intolerable world" (DUMONT, 1988). From that, an essentially regressive culture broth is created in constant friction with technological and scientific innovations that, in the specific case of Brazil,

3 The Superior Court of Justice's website registers 1394 entries for the "precautionary principle" according to a search on 26/Aug/2016. Available on: <http://www.stj.jus.br/SCON/pesquisar.jsp?acao=pesquisar&novaConsulta=true&i=1&data=&livre=principio+da+precau%E7%E3o&opAjuda=SIM&tipo_visualizacao=null&thesaurus=null&p=true&operador=e&processo=&livreMinistro=&relator=&data_inicial=&data_final=&tipo_data=DTDE&livreOrgaoJulgador=&orgao=&ementa=&ref=&siglajud=&numero_leg=&tipo1=&numero_art1=&tipo2=&numero_art2=&tipo3=&numero_art3=&nota=&b=ACOR&b=SUMU&b=DTXT&b=INFJ&todas=todas>.

have generated real perplexities. It is important to remember that the PP is the "last refuge" of the "anti-capitalist fight". Think, for example, of the case of the necessary infrastructure works – known technologies and, thus, no "scientific uncertainties". Issues regarding non-compliance with standards – lack of environmental studies – are solved based on the PP, leading to its vulgarization, such as the case of a decision made by the Federal Regional Court of the 1st Region that maintained the suspension of an environmental permit that had been granted for port works in the Amazon once the port was a "visible drain of transgenic soybeans in the Amazon region, thus exposed to irresponsible deforestation and to the disguised alien colonization" (TRF1, AC 1626120004013902). It is worth mentioning that the major issue discussed in the judicial measure was the requirement or not of a preliminary study of environmental impact for the activity, that is, the issue regarded non-compliance with the standards and not some scientific uncertainty and the issue of national sovereignty was not even addressed.

2 PRUDENCE

What is now called precaution used to be called prudence (*phronesis*) by Aristotle and its content is mainly practical, although it is not restricted to that (AUBENQUE, 2008). The Aristotelian ethics, as it is known, is based on the principle of human responsibility and on the free resolution from concrete experiences so that they can serve as a guide for possible future results from this or that behavior to be brought forward. Thus, prudence is a forecast of future results, indicating actions or omissions to avoid them, those future results are "predictable" as the result of similar past actions is known. The ethics of prudence is formed through repetition, socialization and habit. Therefore, there is a contradiction between prudence and innovation (VERGNIÉRES, 2008). The first one is a form of conservation, of security. Thus, precaution is mainly a conservative attitude.

Prudence, as Solange Vergnières says, is only "infallible" when it deals with something that is "rationally forecastable" (VERGNIÈRES, 2008). When there is no predictability, we enter the fields of speculation and randomness. As the author says, the "Aristotelian ethics is not founded on rupture, but on continuity." (VERGNIÈRES, 2008, p. 135). In the legal field, jurisprudence is the repetition of decisions in a certain sense,

corresponding to the Pretorian understanding of a subject. It is, therefore, the consolidation of past understandings. The resource to the study of jurisprudence allows for the anticipation of "predictable" outcomes of the future legal action. Jurisprudents were the ones that dictated the laws at the light of experience. The change from prudence to precaution does not change its mainly conservative characteristics, even if in "updated" clothes. Prudence imposes a cautious behavior regarding novelties, suspicion regarding innovation. For that reason, it is mainly conservative and it tends to look at the future with the eyes of the past. One of the main difficulties handling scientific uncertainty (border areas of knowledge) is the absence of previous experience that only accumulates by action and repetition. No scientific certainty is acquired through palsy. It is extremely wrong to identify a suitable application of the PP with inaction.

3 THE PRECAUTIONARY PRINCIPLE IN INTERNATIONAL LAW

It was in the 1970's that the German Law established the need for the previous assessment of the consequences over the environment of the different projects and undertakings in progress or to be implemented. The conception was incorporated into the law project for the protection of the quality of the air that was finally approved in 1974 and that established controls for a series of potentially harmful activities such as noises, vibrations and many other related to the quality of the air.

In its original formulation, the principle set forth that *precaution* was to develop processes in all sectors of the economy to significantly reduce negative environmental loads, mainly the ones originated from hazardous substances. Other formulations of the PP were built and, in no time, the *Vorsorgeprinzip* expanded to International Law and to several internal laws, including the Brazilian one.

The Conference of the United Nations on Environment and Development (Rio 92) and other international documents such as, for example, the Protocol of Cartagena and the Convention of Stockholm on Persistent Organic Pollutants included precaution among their concerns.

Prior to the Declaration of Rio, the Charter of Nature, approved by the General Assembly of the United Nations established a set of measures to be adopted in order to avoid irreversible damages to the environment, as defined in paragraph 11[4]. Principle 15 of the Declaration of Rio talks about precautionary measures in the French version (*mesures de précaution*) or precautionary approach in the English version. The official Brazilian translation of that document changed the precautionary measures or the precautionary approach into the precautionary principle.

> So as to protect the environment, the *precautionary* principle has to be fully followed by the States, according to their capacities. Whenever there is a threat of serious or irreversible damages, the lack of absolute scientific certainty shall not be used as a reason to delay efficient and economically feasible measures to prevent environmental degradation.

It is important to say that the Declaration of Rio is not a legal document with mandatory power. It is a political statement. Thus, the "principles" set forth by it are not binding from the stand point of International Law. As it is known, legal principles are ideas – power that structure a legal system, regardless the fact that it is written or not, and as such, they are mandatory once they were given positivity, which fails to happen to *measures* or *approaches*.

See below the difference between the official texts in Portuguese, English and French of principle 15 of the Declaration of Rio.

4 Activities which might have an impact on nature shall be controlled, and the best available technologies that minimize significant risks to nature or other adverse effects shall be used; in particular: (a) Activities which are likely to cause irreversible damage to nature shall be avoided; (b) Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed; (c) Activities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects; (d) Agriculture, grazing, forestry and fisheries practices shall be adapted to the natural characteristics and constraints of given areas; (e) Areas degraded by human activities shall be rehabilitated for purposes in accord with their natural potential and compatible with the well-being of affected populations.

Declaration of Rio		
Portuguese	English	French
Princípio 15 Com o fim de proteger o meio ambiente, o **princípio da precaução** deverá ser amplamente observado pelos Estados, de acordo com suas capacidades. Quando houver ameaça de danos graves ou irreversíveis, a ausência de certeza científica absoluta não será utilizada como razão para o adiamento de medidas economicamente viáveis para prevenir a degradação ambiental.	Principle 15 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.	Principe 15 Pour protéger l'environnement, **des mesures de précaution** doivent être largement appliquées par les Etats selon leurs capacités. En cas de risque de dommages graves ou irréversibles, l'absence de certitude scientifique absolue ne doit pas servir de prétexte pour remettre à plus tard l'adoption de mesures effectives visant à prévenir la dégradation de l'environnement.

The same standard for translation was adopted for international conventions, changing *approaches* and *precautionary measures* into *principles*.

Convention on Persistent Organic Pollutants – POPS		
Portuguese	English	French
Artigo1º Objetivo Tendo presente o **Princípio da precaução** consagrado no Princípio 15 da Declaração do Rio sobre Meio Ambiente e Desenvolvimento, o objetivo da presente Convenção é proteger a saúde humana e o meio ambiente dos poluentes orgânicos persistentes	Article 1 Objective Mindful of **the precautionary approach** as set forth in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Convention is to protect human health and the environment from persistent organic pollutants.	Article premier Objectif Compte tenu de **l'approche de précaution** énoncée dans le principe 15 de la Déclaration de Rio sur l'environnement et le développement, l'objectif de la présente Convention est de protéger la santé humaine et l'environnement des polluants organiques persistants.

From the analysis of principle 15 of the Declaration of Rio, one can notice that precaution: (i) is defined by the international order but, on the contrary, has to materialize in the internal order of each State according to their capacities. Thus, its application should consider the set of available resources in each one of the States for environmental protection, thinking of local peculiarities; (ii) the doubt about the harmful nature of a substance should not be interpreted as if there was no risk. However, risks have to be identified based on scientific information, with suitable protocols. The simple doubt – with no consistent base elements – should not be used as a basis for the paralyzation of activities without the necessary justifications. Doubt is an essential element for the progress of science.

All scientific knowledge is subject to doubt; (iii) it does not apply to the threat of any kind of damage, but only the severe and irreversible ones and (iv) it does not define the paralyzation of all and any activity but, on the contrary, it imposes taking care and monitoring measures even for scientific knowledge to advance and doubt is clarified.

It is important to highlight that the so called precautionary principle is not recognized by the International Court of Justice as mandatory for all States once it is abstract (CAMERON, 1994, p. 256). One can also notice that in the internal law, the precautionary principle is gradually being introduced by means of several federal, state and municipal laws that expressly invoke it. At the federal level, the National Biodiversity Policy, the Biosafety Law, the National Policy on Climate Changes and the National Policy on Solid Waste can be listed as examples.

And now, it is important to highlight that the Portal of Biodiversity[5] fails to present guidelines for the application of the PP and either does the site of the National Technical Commission of Biosafety. In what regards the National Policy of Solid Waste and the National Policy on Climate Changes, guidelines regarding the application of the precautionary measures are also not known. The lack of operational guidelines for the application of the PP changes it from a risk management instrument into a simple risk.

What gets closer from a guideline is an unclear and poor definition of the PP in the site of the Ministry of Environment[6].

4 PRECAUTIONARY PRINCIPLE AND FUTURE

One of the most precious elements of environmental law and environmental policies is the so called intergenerational ethics, which is present in the *caput* of article 225 of the Federal Constitution. The current economic activities are often identified as causing disturbance to the future

5 Available at: <https://portaldabiodiversidade.icmbio.gov.br/portal/>. Access on: May 11, 2016.

6 "The precautionary principle was formulated by the Greek and it means to be careful and aware. Precaution is related to the respectful and functional association between men and nature. These are anticipating actions to protect the health of people and ecosystems. Precaution is one of the principles that guide human activities and it incorporates part of other concepts such as justice, equity, respect, common sense and prevention. In the modern era, the Precautionary Principle was firstly developed and consolidated in Germany in the 70's and it was known as Vorsorge Prinzip. About 20 years later, the Precautionary Principle was set forth in all European countries. Although it was initially the answer to industrial pollution that caused acid rain and dermatitis, among other problems, the principle referred to is being applied in all sectors of the economy that can, somehow, result in adverse effects to human health and to the environment." – Available at: <http://www.mma.gov.br/legislacao/item/7512-princ%C3%ADpio-da-precau%C3%A7%C3%A3o>. Access on: May 14, 2016.

and, due to that, with a chance to harm future generations. It is particularly relevant to remember the point of view of Ingo Wolfgang Sarlet and Tiago Fensterseifer that human dignity is the basis of the present society as well as of the future, signaling duties and responsibilities of fellows concerning the future, notwithstanding the heavy environmental legacy left to current generations by the past ones (SARLET; FENSTERSEIFER, 2013, p. 52):

The concern with the future – save resources today so that they are available tomorrow – is an issue that is subject to several objective variables. The objective is to act in the present with the eyes turned to the future. However, it is necessary to define the future we are talking about: one, two, ten generations? Remember Giannetti (GIANNETTI, 2005, p. 149) when he says that inter temporal choices are a double track lane: one saves to use in the future or brings consumption forward and losses in the future. Present choices define the future as well as the future, to some extent, reflects the choices made in the present.

Saving environmental resources today to use them in the future, that is, partly bequeath them to the future generations, similarly to any kind of savings, implies in the existence of a *surplus* regarding those resources that may be reserved. However, it is important to notice that certain countries and communities simply lack resources to be saved for future use because they need them in the present. In Kenya, for example, wood and vegetal coal represent the most important source of energy for the population, also serving for the creation of formal and informal jobs, generating a high level of deforestation (UNEP NEWS CENTRE, 2012). Thus, it is an owing position. Notice deforestation, in the case referred to, is based on extreme poverty and not on wealth. It seems reasonable that the improvement of the levels of income and standards of living of extremely poor populations is one of the relevant issues to quit the owing position and start accumulating resources for the days to come.

How much to save for the future also depends on the conception of the future itself based on objective data or based on more or less optimistic assumptions. The fair point regarding the concern about tomorrow is not easy to get to once it depends on the present situation. Too much concern can, in thesis, be as harmful as negligence since "the fear of abandonment and an excessive concern about tomorrow and after tomorrow may suffocate life and empty it from meaning" (GIANNETTI, 2005, p 182).

The population's ageing process has generated an externality that is seldom noticed, which is a greater concern with the future and the

increase of the fear regarding what is yet to come. That is a natural tendency of conservatism that increases with age due to economic imbalances, environmental imbalances, conservatism that, from the social point of view, tends to increase in more steady societies that enjoy better economic resources.

As already seen above, prudence starts from experience and, hence, the assessment of a risk comes from the exam of similar situations that happened before. However, when it comes to new technology, there is no background of precedents that are able to indicate possible future results. How to deal with that issue? One can certainly not start from the assumption that human interventions over the environment are essentially negative, reason why they have to be avoided at any price. Predicting the future is not an easy task and it not always produces good results. Celebrating the 46th anniversary of the Earth Day, Hannah Waters (WATERS, 2016) informs that many scientists forecasted a dark future, with a lot of pollution and destruction, mass extinction, the depletion of and other mineral reserves. That would be the scenario in the year of 2000 and that, fortunately, has not taken place.

In what regards unrealized forecasts, it is possible to notice that they expanded and, in the Brazilian case, they have been serving as a base for legal decisions. In fact, the Superior Court of Justice has been deciding cases using as an argument "abuses" towards nature together with the "greed of the consumerist society" that brought "close the remote threat" of natural resource depletion, even falling back on James Lovelock, "the formulator of the Gaia hypothesis" and Mikhail Gorbatchev, who "stated that the society would have thirty years to change its consumption habits" under the penalty that the Earth kept existing with no human presence (STJ, AgRg no AResp 476067/SP). The Court was moved with no criticism by incorrect data that it could easily have checked.

As Hannah Waters remembers (WATERS, 2016): "The truth is more complicated". The exact measure of the decision to be taken in what regards possible future damages is a complex subject that cannot be solved by using the force.

4.1 Negative definition

According to Karl Popper, "we live in a time when, again, irrationalism became fashionable" (POPPER, 2008, p. 13). One of

the points in which the irrationalist "fashion" outstands the most is the environmental issue and, in it, the application of the PP. The level of indetermination and controversy regarding an operational definition of the PP is such that, interestingly, it is simpler to define it negatively, that is, *what cannot be understood* as PP. That, for example, was the criterion adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) that carried out a detailed study on the subject in which it warns that, in order to avoid confusion on the subject of the PP, it is convenient to think about what the PP is *not*. When presenting some negative cases of the PP, it starts by saying that it is not based on "zero risk". However, it aims at reaching the lowest levels of acceptable risks possible. The PP is also not a demonstration of emotion or anxiety but, on the contrary, a rule for "rational decision" based on ethics and that tries to use the best scientific practices and complex processes for a "wiser" decision making. Though, once it is not an algorithm, it is not able to guarantee coherence and consistency among all the cases. Similarly to judicial litigations, each case has its own solution according to the facts and circumstances and the decision maker him/herself, and it is not possible to discard the "judgment element" (UNESCO, 2005), that is, some kind of discretion.

Thus, precaution cannot be a general, open and indefinite clause. First of all, it is a methodology to be used to manage risks inherent to activities using environmental resources, trying to reduce them to standards that are socially acceptable. Though, it seems quite clear that it is necessary to previously define what is to be prevented and what is the risk to be avoided. Nevertheless, that can only be done in face of the analysis of the different alternatives which appear for the implementation or not of a certain project or activity. Part of the legal doctrine, as is the example of Rodrigues (RODRIGUES, 2002, p. 150), atributes to the PP the function of avoiding the *minimum* risks, as if it was possible or rational to have activities with a zero risk. That is why it is essential to have guidelines to be applied to concrete cases. However, there is strong resistance from the specialized doctrine that tends to consider "minimum risks" the ones to be avoided, that is, exactly the opposite of what an appropriate application of the PP would recommend.

It is worth registering the fact that, leaving aside merely theoretical risks and carrying out the analysis of the risk concretely considered, the visions and conceptions of risk not always match once they are subordinated to the harm to be avoided. It is the case of the DDT

pesticide and fighting malaria: researches demonstrated that malaria had reappeared in the locations in the Amazon that had abandoned the use of DDT as part of the strategy to face the vectors. However, the same failed to happen, for example, in Venezuela and Ecuador, countries that did not interrupt the use of DDT. There is relevant controversy on the effects of DDT on the human health once the technical standards are followed, especially for application. On the other hand, in many poor countries, the use of organichlorides is still the most economic and efficient way to fight the vectors and there is no substitute that is simultaneously efficient and at a reasonable price (DÀMATO; TORRES; P.M.; MALM, 2002).

The World Health Organization itself admits the use DDT as a valid instrument to fight vectors. In accord with the position adopted by the World Health Organization, decision SC 6/1 is worth registering: DDT adopted by the Conference of the Parties of the Convention of Stockholm (WHO, 2013) that recognized in its sixth meeting the "continued need" for DDT to control vectors while there are no economically and environmentally feasible alternatives to replace the product. Consequently, it is useless to talk about precaution without defining the risks to be avoided.

5 THE PRECAUTIONARY PRINCIPLE IN THE FEDERAL SUPREME COURT

In face of the absence of administrative guidelines for the application of the PP, the Judiciary Branch has occupied the political spaces related to the subject and it has established a judicial concept of the PP, which is not always able to serve as a guide for broader environmental policies since the Judiciary decides on a case law basis without the group view that is suitable for the application of public policies. Thus, the Administration that, in theory, should play the main role in that subject, is relegated to the background in a subordinate role. The summit of the Brazilian Judiciary, the Federal Supreme Court, has been deciding several cases based on the PP and, as a rule, its decisions are more according to more accurate conceptions on the real meaning of the PP than the ones issued by lower courts, including the Superior Court of Justice. Some relevant decisions were chosen to demonstrate the thesis: (i) Direct Unconstitutionality Lawsuit - ADI 3.510/DF in which the biosafety law

was questioned; (ii) Claim of Non Compliance with Fundamental Precept 101/DF in which the debate was on the restriction to import used tires and (iii) Direct Unconstitutionality Lawsuit 5447/DF.

5.1 Direct Unconstitutionality Lawsuit 3.510/DF

The first measure of abstract control of constitutionality that dealt with the PP was the ADI proposed by the Attorney General contesting the constitutionality of the use of stem cells in scientific research authorized by Law n. 11.105, dated March 24, 2005. The PP was deeply discussed in the ADI, especially in what regards its application in terms of public health. The vote of the Rapporteur, Minister Ayres Britto, assumes that the PP is a widely present principle when dealing with the "preservation of life at a broader scale". Minister Ayres de Brito understands that the PP is not explicit in the Brazilian Constitution, although it is sheltered by articles 196 and 225 of the Fundamental Law of the Republic. According to the vote, the precautionary principle was made clear, in a "pioneer" way, in the Conference Rio 92 and expanded in Wingspread, in a famous meeting promoted by the Johnson Foundation in 1998, which counted on the "participation of scientists, legal experts, legislators and environmentalists". The final declaration uttered in Wingspread states that, when an activity threats the environment or human health, prevention measures have to be taken even when it is not possible to scientifically set forth a cause and effect relationship. Notice that the Court has not used the concept of scientific uncertainty, but it simply disregarded the existence of any scientifically verifiable relation.

The analysis of the decision demonstrates that the PP was created regardless the existence of scientific certainties or uncertainties and it is integrated by: (i) precaution regarding any scientific knowledge, (ii) exploration of alternatives for potentially harmful actions, including the non-realization of the action, (iii) inversion of the burden of proof for the entrepreneur and taking it from the current or potential victims, (iv) use of the democratic process of decision with a highlight on the subjective right to informed consent.

Surprisingly, the PP, which is evidently anticipating, is treated as an instrument to be used for damage reconstitution. However, at that point, it is important to go beyond the "old perspective and reconstitution of possible losses" once the PP would also shelter measures that would be

able to legislate, forbid and punish certain behaviors according to the vote of the reporting judge.

The Rapporteur understood that it is not a matter of requiring total abstention from actions that may involve risks once that would cause the "palsy of scientific and technological development". It is necessary, according to the decision, to set forth mechanisms that are able to insure participation in decision making processes so that risks are socially accepted. Thus, the decision is widely contradictory and it ends up by reducing the PP to a simple instrument of popular participation in decision making that is in a sui generis position in what regards the subject.

Furthermore, the vote of Minister Ayres de Britto expressly recognizes the influence of a document created in a meeting held by a Non-Governmental Organization (Johnson Foundation), which issued a Declaration on the Precautionary Principle from the assumption that (i) legal environment protection standards in force fail to protect the environment and human health in an appropriate way, (ii) in face of the gravity of the threat against the environment and human health, new principles are necessary, (iii) better attention shall be given even if one recognizes that the human activity may imply risk (JOHNSON FOUNDATION, 1998).

It is important to highlight that the vote of Minister Ayres de Britto attributes normative power to the meeting held at Johnson Foundation that issued a Declaration entered into by a very small number of people (31 people to be more precise) who signed it individually and, as a consequence, there is no possibility to expand principles established in International Declarations entered into by over 100 Heads of State, as was the case of the Declaration of Rio that, as already seen in its original French and English versions, not even considered precaution as a principle. It is important to notice that the parameters adopted by the vote of the Minister were the same parameters in the Declaration of Wingspread – compare the texts. As seen, what was decided at the ADI is very close to the decisions in the lower courts presented, as well as the decisions issued by the Superior Court of Justice regarding the PP. It is not necessary to stress the strong influence of visions coming from non-governmental organizations and little thought over the PP as an instrument of risk management.

5.2 Claim of Non Compliance with Fundamental Precept n. 101/DF

In this case, the subject regarded the prohibition to import used tires to be reused in Brazil. The Claim of Non Compliance with Fundamental Precept (ADPF) was brought by the President of the Republic based on articles 102, § 1 and 103 of the Constitution of the Republic and on article 2, item I of Law n. 9.882/1999. At that time, there was a large number of conflicting judicial decisions on the subject and, according to the plaintiff, they violated article 225 of the Constitution of the Republic. In fact, the judicial decisions mentioned in the ADPF contradicted Decrees issued by the Department of Operations of Foreign Trade – Decex and by Secretary of Foreign Trade – Secex, Resolutions of the National Council of Environment – Conama and Federal Decrees that expressly prohibited importing used consumption goods, special reference to used tires, object of this Claim. The decision issued by the Federal Supreme Court considered (i) the existence of a litigation with the European Union at the level of the World Trade Organization, (ii) the increase of the world fleet of vehicles together with the increase of new tires and the need of replacement due to the use, (iii) the need for ecologically suitable destination, (iv) the impossibility to totally eliminate the harmful effects of the destination of used tires, with damages to the environment. The court also invoked the constitutional principles (i) of sustainable development, and (ii) of the equity and intergenerational responsibility. It also remembered compliance with the precautionary principle– "constitutionally accepted" – that should be harmonized with the other principles related to the social and economic order.

The Federal Supreme Court made use of the right to health by saying that de deposit of tires outdoors, "inexorable with the lack of use of useless tires", receiving incentive from the import, is a vector for the spread of diseases. The state action – prohibition to import – would, thus, be legitimated by its reasonableness and it is a "preventive, prudent and cautious" measure substantiated in a public policy that is able to fight the causes of the increase of severe and/or contagious diseases.

As we can conclude, the Federal Supreme Court did not base its arguments on the existence of the PP, which is the scientific uncertainty. When the PP was mentioned in the decision, as one can see in the vote of Minister Carmem Lúcia, one cannot notice a relationship between the concrete case and the scientific uncertainty. However, it is clear that the

STF considered that the Declaration of Rio aims at, in what regards the PP, "privileging acts of damage risk anticipation prior to acts of repairing" under the argument that, on the environmental subject, "the repair is not always possible or feasible". "It is important to say that, in the concrete case, the STF established a fundamental guideline so that the concept of scientific uncertainty is limited: it has to be built on 'reasonable arguments'".

Thus, the mere opinion of disagreement, the point of view to the contrary is not a legally relevant scientific uncertainty. Scientific uncertainty has to be understood as the existing doubts regarding knowledge in "the state of the art" of the issue and duly recognized by a significant portion of the scientific community.

In the understanding of the Supreme Court, as decided in ADPF n. 101/DF, the PP is directly linked to (i) the need to move danger away and create safe procedures for the guarantee of future generations and "it is not necessary to prove the current and imminent risk of damages that may take place through an activity so that the adoption of precaution measures is imposed". Finally, the Court declared that "an economic crisis cannot be solved through the creation of another crisis which harms the health of people and the environment", that is, a pondering element was established to put health and human life in a prominent position.

Unfortunately, the STF failed to set a guideline for the acceptable risk to be measured and separated from the inacceptable one. Emphasis is given to the issue, once the so called zero risk is not compatible with the PP.

5.3 Direct Unconstitutionality Lawsuit 5447/DF

ADI nº 5.447/DF, still pending judgment and in which there is only the preliminary injunction granted by Minister Roberto Barroso, is the one that better treated the important issue of the scientific uncertainty and starting from what had previously been set by ADI 3510/DF. The object of the ADI is the declaration of unconstitutionality of Legislative Decree n. 293/2015, which suspended the effects of Interministerial Ordinance n. 192/2015 under the justification that the Executive Branch exceeds its regulatory power.

The ADI stated that art. 3, IV of Law 11.959/2009 sets forth the competence of the Executive to define, on a case law, the prevent periods according to the level of vulnerability of the species and the exploration

of fishing. Thus, based on that competence and with an eye on the "need for review", Interministerial Ordinance n. 192/2015 suspended the prevent period. According to the report issued by Minister Barroso, the Government claimed that such suspension would be justified once (i) available information on some species is precarious and it is not enough evidence of the current need for protection, (ii) the maintenance of the prevent periods suspended by the ordinance would require the payment of the "prevent insurance", which is estimated at about R$ 1,615,119,288.09 (one billion, six hundred and fifteen million, one hundred and nineteen Thousand, two hundred and eighty-eight reais and nine cents) plus operational cost of R$ 3,000,000.00 (three million) for the a implementation of the benefit by the National Institute of Social Security - INSS, due to the need of displacing employees to remote locations, (iii) there is evidence of fraud regarding the payment of the prevent insurance due to the disproportionate increase of the number of beneficiaries, (iv) the legislative decree under discussion, under the pretext of suspending an act of the Executive, which would have exceeded its regulatory power, violated the constitutional principle of the separation of powers once the Executive has the exclusive power, granted by a legal provision, to judge the opportunity and convenience in what regards the definition of the prevent period and, consequently, its suspension.

The Federal Supreme Court understood, in that case, that the PP was disregarded, which entailed risks to a balanced environment, the Brazilian fauna, to the population's food safety and to the preservation of vulnerable groups dedicated to artisanal fishing. The reason given for the issue of the Interministerial Ordinance was the existence of a huge fraud connected to the payment of the prevent insurance, which forced the suspension of the measure to protect the fauna due to the economic losses imposed to the Public Treasury. According to the Court, the Executive failed to base the Interministerial Ordinance on "minimum objective evidence that indicate the vraisemblance of fraud in a proportion that justifies extreme measures." Thus, it is clear that, in line with what had been decided by ADI 3540/DF, it is necessary to submit "reasonable" scientific arguments and not only simple inconsistent claims, a scientific uncertainty.

The preliminary injunction was granted due to the "violation of the constitutional principle of precaution, based on the following reasons: (i) the initial petition failed to point out objective data – technical-

environmental – that would not demonstrate the need to maintain the prevent periods that had been suspended, merely saying that the level of knowledge about fishing resources is "irrelevant for most species in Brazil", (ii) that the suspension of the prevent was important for the review of applicable standards, (iii) lack of enough evidence that suspended prevent periods were necessary for the preservation of species involved. The arguments of the government is, at all lights, the application of the PP à l`envers.

Minister Barroso refuted the arguments of the Government, emphasizing that "the suspension of prevent periods was based on mere suspicion or possibility that, in some of those cases, the interruption of fishing would not be necessary anymore. "That is, in doubt, before the scientific uncertainty, the protection measure was suspended regardless any concrete confirmation regarding "its effective dismissal or regarding the consequences on the volume of fishes in the different locations and on the population's food safety."

Thus, the only legally possible conclusion was that in face of the inconsistency of information concerning the need or not for the period of prevent, the public authority should keep it while carrying out the necessary studies to review the subject, if necessary.

FINAL CONSIDERATIONS

Before all the exposition in the present article, it was possible to notice the lack of express legal or administrative guidelines that rule the application of the precautionary principle as an instrument to manage risks related to scientific uncertainty in Brazil. That situation randomizes the application of the PP and even makes it "pamphleteering" once there is a hypertrophy in the use of the principles in the Brazilian Law due to a very unsafe and unpredictable regulatory environment.

The Public Administration allowed, through omission, the Judiciary to take care of a typically administrative function that is the definition of public policies, which, in that case, is risk management. Courts of justice have acted in a completely random way in regards to the application of the PP and not in line with the international interpretation trend concerning the PP. That kind of interpretation finds support on doctrinarian production that could be called principist, which tends to trivialize the concept of precaution, confusing it with the one of inaction.

The STF is building an evolutionary interpretation of the PP that, starting from a concept that is not very different from the ones that were criticized herein, progressed to establish an operational concept of scientific uncertainty – fundamental for the application of the PP. A tendency to use prudence based on previous experiences and not getting impressed by mere claims of possible risks, differently from what happens in other Courts of Justice, was noticeable in the jurisprudence of the STF. That was also seen in the other decisions examined in this article. Thus, the STF has been playing an important moderating role in the application of the Precautionary Principle, emptying "pamphleteering" applications that have many times characterized its application by the Judiciary, result of an activism with no consistent scientific basis.

Finally, it is essential that the decisions issued by the majority of the STF based on rationality and pondering are followed by the other national courts since they are taken at a level where deliberations have *erga omnes* effectiveness.

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