

Received: 12-07-2025

Accepted: 04-09-2025

The Legal Aspects of the Precautionary Principle

Bentaallah Zahira*

University of Ain Temouchent (Algeria),
Laboratory of Fundamental Private Lawzahira.bentaallah@univ-temouchent.edu.dz<https://orcid.org/my-orcid?orcid=0000-0002-1674-5731>

Abstract:

The changing nature of damage has rendered the precautionary principle a novel approach to managing risks that threaten human health, safety, and the environment, particularly in light of the risks generated by the scientific and technological advancements the world is currently witnessing. It has become evident that the significant challenges and resulting harms imposed by such advancements are, at times, difficult to resist and impossible to remedy.

This research paper aims to examine the precautionary principle, which has evolved from a philosophical concept into a genuine legal principle. The study sheds light on its various legal dimensions, beginning with an exploration of its nature, since a misinterpretation of the principle may hinder the development and progress sought by states followed by an analysis of the conditions required for its application, and ultimately addressing its legal value and the consequences arising from its implementation.

Keywords: Precautionary principle, risks, legal value, potential harm, scientific advancement, consequences.

*Corresponding author

INTRODUCTION

The scientific and technological developments that humanity is witnessing, which have affected various aspects of life, have revealed their enormous impact, rendering traditional legal rules incapable of keeping pace with the speed of this development. This has necessitated the search for new mechanisms that are somewhat compatible with these developments, enabling them to be regulated.

On this basis, new concepts have emerged in the context of the development of law to ensure that disasters resulting from scientific, technological, and even technical progress are addressed. This concerns the precautionary principle established by international law in the field of environmental protection, given its prominent role in ensuring effective protection to achieve environmental sustainability for both present and future generations, which imposes an obligation on states to take all proactive measures to prevent environmental degradation, even in the absence of scientific certainty¹.

This principle has gradually evolved from a philosophical concept without normative value to a guiding principle that contributes to directing and guiding public policy to address environmental degradation, becoming one of the most important legal principles aimed at addressing potential risks in a proactive step to avoid or minimize them.

Although the precautionary principle was initially associated with the environmental field, it has since evolved to encompass other areas in order to keep pace with unknown and uncertain dangers and harms that threaten security, safety, and public health, thus forming a precautionary and forward-looking principle that allows for intervention when there is a potential danger whose severity has not yet been scientifically established.

Based on the above, the research paper focuses on the following questions: **What is the precautionary principle, and how effective is it in addressing risks whose occurrence is uncertain in the absence of scientific certainty?**

This research paper aims to shed light on one of the most important legal principles established by international law, namely the principle of precaution, or as it is commonly referred to, the principle of prudence or caution, by defining its concept as a new principle based on hypothetical risks that threaten the future of humanity and its scope of application², as well as its legal value derived from the international instruments that formulated it and judicial applications, in addition to the most important consequences of its application.

Based on the above, and to answer the above question and all related questions, a descriptive approach was adopted by presenting the concepts related to the subject of the study, while employing an analytical approach during the research based on the following plan:

First section: The origins of the precautionary principle.

Second section: The legal value of the principle of caution and the impact of its application.

The first section: The origin of the principle of caution

There is no doubt that the circumstances in which the principle of caution arose gave it a distinctive and unique character compared to other principles, given its deviation from the general rules that were a factor in the activation of these principles, which were based on scientific certainty³.

The principle of precaution has undergone a remarkable development, moving from a mere philosophical concept without any normative value to a legal principle, although this description is disputed by some jurists. Due to its importance, we will review the concept of the principle of precaution (first), then the conditions for its implementation, or as it is termed, the conditions for activating the precautionary principle (second).

First: The concept of the precautionary principle

The precautionary principle first appeared in 1970, specifically in Germany—the Federal Republic of Germany—on the occasion of the Vorsorgeprinzip conference to prepare a draft law on ensuring clean air. It spread to Northern Europe, and then became an internationally recognized principle in 1981, embodied in the Earth Summit held in Rio de Janeiro on

biodiversity from June 3 to 14, 1992, which concluded with the issuance of the Rio Declaration signed on June 5 of the same year.

This declaration is considered one of the most important global declarations on environmental issues, where the precautionary principle was internationally recognized and legally enshrined in its 15th principle, which states that:

“In order to protect the environment, States shall take precautionary measures on a global scale according to their capabilities. In cases of serious or irreversible damage, the lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”⁴.

It is clear from this text that it does not define the precautionary principle, but merely refers to the most important elements of the precautionary principle, namely the existence of a risk of serious damage or damage that cannot be prevented or remedied, in addition to the absence of scientific certainty and the need to take effective preventive measures aimed at avoiding or at least minimizing damage.

Approximately 175 countries around the world have signed this declaration, which has become the basis for all international agreements in the field of the environment. Some of these countries, such as Algeria, have even incorporated certain principles of the Rio Declaration into their national legislation.

As for the concept of the precautionary principle, definitions have varied for two reasons. The first is the multiplicity and imprecision of the terms and expressions used to refer to the precautionary principle, which makes it difficult to assign a comprehensive definition to this principle. The second reason is that the concept of the precautionary principle overlaps with the principle of prevention, which is a traditional system of protection against known and scientifically proven hazards⁵. This is due to the lack of a precise definition of the precautionary principle and its scope, which would clarify its unique and distinct position from the principle of prevention.

The precautionary principle has been described as “an expression of popular wisdom that, in the face of uncertainty, favors prudence over what could be suicidal boldness.”⁶

The French Barnier Law of February 5, 1995, on strengthening environmental protection defines it as follows: “The absence of scientific certainty, given the current state of scientific and technical knowledge, should not lead to a delay in the adoption of effective and proportionate measures to prevent the risk of serious damage to the environment that cannot be remedied at an acceptable economic cost”.

In any case, the concept of the precautionary principle refers to a set of precautionary measures and procedures aimed at avoiding scientifically uncertain risks of a certain degree of severity or at least minimizing their effects. Hence, the “positive dimension of the precautionary principle emerges, as it calls for further research and expertise to remove uncertainty about the possibility of risks and the possibility of anticipating and assessing potential damage if they occur”⁷.

As for Algerian legislation, we find that it was enshrined for the first time in the field of environmental protection in Law No. 03-10⁸ on environmental protection in the context of sustainable development, under paragraph 6 of Article 3 thereof, which provides a definition based on the 1992 Rio de Janeiro Declaration, which states: “The precautionary principle, whereby the lack of available technology, given current scientific and technical knowledge, should not be used as a reason for postponing the adoption of effective and proportionate measures to prevent the risk of serious damage to the environment, at an acceptable economic cost”.

Second: Conditions for applying the precautionary principle

Applying the precautionary principle requires a set of basic conditions to be met, which are mainly related to the absence of scientific certainty, or what is known as the lack of scientific knowledge, the assumption of a risk that threatens serious and irreversible damage, and the proportionality between the nature of the risk of damage and the cost of covering it.

1. Lack of scientific certainty:

The lack of scientific certainty regarding the risk is considered the basis of the precautionary principle and one of the most important conditions for its implementation, as the latter emphasizes that the lack of scientific certainty should not be considered an excuse for not taking proactive measures to avoid potential future harm. So, what is meant by the absence of scientific certainty as a prerequisite for applying the precautionary principle? And how can it be achieved, especially since it is a temporary situation due to the progress and development of scientific research?

Scientific uncertainty refers to: “the lack of sufficient data or information to make an informed decision due to the difficulty of assessing the safety or harm of an activity, product, or service to the environment or human health.”⁹

Or it is: “the complete absence of scientific knowledge of all or some aspects related to the potential risk to the environment or the risk of the product or service, given that the scientific data is not sufficiently available to confirm it.”¹⁰

Therefore, as long as there is doubt about the possibility of irreparable damage caused by the activity, product, or service, without this doubt being supported by conclusive scientific evidence, it is imperative to apply the precautionary principle and take effective proactive measures to prevent damage, even if scientific, technological, or technical knowledge at the time does not prove its existence.

It should be noted in this context that scientific uncertainty about the causal relationship between the magnitude of the risk and the potential effects of damage that may be caused by certain activities is not permanent and may be dispelled by advances in scientific research and ongoing developments in this field. Although this consideration does not, in principle, affect the need to apply the precautionary principle, especially since the impact of the potential risk that the principle requires to be addressed by taking effective measures to prevent it from occurring is not immediately apparent, the content of the precautionary measures varies between strictness and leniency depending on the degree of scientific certainty¹¹.

The precautionary principle is an evolving principle whose content varies with scientific progress and the degree of its development. Therefore, when scientific certainty replaces uncertainty, there is a shift from applying the precautionary principle to activating the prevention principle as a traditional system of protection against risks, and this is where the difference between the two principles becomes apparent.

2. The existence of a risk that predicts serious or irreparable damage:

The absence of scientific certainty regarding the potential damage is not sufficient to apply the precautionary principle. There are other conditions related to the nature of the risk that the precautionary principle is intended to address.

In this regard, if prevention is a principle of certain risk management¹², precaution is based on suspected risks, meaning that there is doubt about the likelihood of an activity causing serious or irreparable damage according to prevailing prevention rules. The basis for this doubt or assumption stems from the absence of scientific certainty, as the lack of complete scientific knowledge of all or some of the effects of an activity, product, or service raises doubts about its safety and, as a result, the possibility that it may pose risks that threaten or are likely to threaten the security, health, or safety of humans or their environment. Accordingly, the presumption of fault or causation based on the idea of presumed fault leading to harm is negated.

The application of the precautionary principle requires the severity of the harm, as many international instruments have emphasized the specificity of the harm associated with the application of the precautionary principle, as it differs from the harm required by the application of other principles. The obligation of precaution has established a new concept, namely that the absence of conclusive scientific evidence regarding the safety of a product, service, or activity is not sufficient to assume its safety.

The potential harm in this case is governed by the condition of seriousness, as the degree of seriousness of the potential harm is a condition for the application of the precautionary principle, namely harm that is irreparable and irrecoverable, thereby expanding the precautionary principle beyond the concept of compensable harm.

3. Adoption of effective precautionary measures that are proportionate and economically acceptable:

In addition to the two previous conditions, there is another condition relating to the need to take into account the economic cost of implementing the precautionary measures adopted to avert a risk of damage of a certain degree of seriousness, which must be proportionate to the level of protection.

Although this condition remains a matter of debate, in our view, the notion of proportionality between the economic cost of precautionary measures and the level of protection—namely, their effectiveness—should not be understood as allowing for the justification of inaction merely because such measures are deemed too costly or economically burdensome. Rather, the costs must be effective and as minimal as possible to achieve the intended objective of applying the precautionary principle, while also being comprehensive and covering all adopted measures. This interpretation is affirmed by the United Nations Framework Convention on Climate Change, adopted in New York in 1992, specifically in paragraph 3 of Article 3.¹³

This is also confirmed by French legislation under the Barney Law of 1995, and by Algerian legislation under both Law No. 03-10 on environmental protection in the context of sustainable development and Law No. 04-20 on the prevention of major risks and disaster management in the context of sustainable development.

Based on the above, the positive dimension of the precautionary principle is clear, which lies mainly in proactively addressing risks to avoid or mitigate them by taking a set of restrictive or even prohibitive measures in many cases until scientific evidence of no harm is obtained through research and study.¹⁴

The second section: The legal value of the precautionary principle and the impact of its application

The search for the legal value of the precautionary principle is extremely important, and we can only arrive at it by shedding light on its established and clear applications (first), then moving on to highlight the most important results of applying the precautionary principle (second).

First: The legal value of the precautionary principle

The ambiguity surrounding the legal value of the precautionary principle stems from the fact that it is an immature principle. Although there are many international instruments that directly or indirectly adopt the precautionary principle, which has made it widely known in various international systems, the lack of precision in defining its concept and the variation in the terminology and formulations used to express the precautionary principle¹⁵ have cast doubt on its legal value¹⁶.

This has raised the question of whether the principle is merely a guideline that does not amount to a binding legal rule, or whether this was the case initially before it expanded into national legal systems to establish its legal existence, which gives it the ability to produce legal effects on those addressed by it.

Based on the above, the legal value of the precautionary principle is evident from its established applications. If we try to monitor the position of international courts on the precautionary principle, we find that it varies, with their positions being relatively timid. The following is a review of some of the issues raised:

1. The International Court of Justice:

It has had more than one opportunity to rule on the legal value of the precautionary principle, but it avoided doing so in the case of the second French nuclear tests in 1992, based on a complaint filed by New Zealand demanding that France stop its nuclear tests in the Pacific Ocean because it had not proven that these tests were not harmful to the environment, so it had to stop as long as it could not establish proof of that (reversing the burden of proof). France insisted in its defense that the precautionary principle that New Zealand was demanding be applied in the case was not binding. The court ignored New Zealand's arguments and ruled on September 22, 1995, not to adjudicate on the subject of the dispute due to procedural errors.

The second case brought before it concerns the case of *Gabcikovo-Nagymaros*, involving Hungary and Slovakia. The dispute relates to a project for the construction of a dam and a hydroelectric power plant on the Danube River, where Hungary suspended the works, withdrawing from the bilateral treaty concluded between the two States, citing potential ecological risks and explicitly invoking the precautionary principle to justify its position. Slovakia, however, viewed this justification as merely a pretext for evading responsibility, which led it to bring the dispute before the International Court of Justice. During its examination of the arguments raised, the Court completely disregarded the precautionary principle, and in its judgment dated 25 September 1997, considered the arguments to be unfounded as they were not based on established facts¹⁷. The Court merely affirmed the legal value of the principle of prevention and the principle of sustainable development¹⁸.

The International Court of Justice remained firm in its position on the precautionary principle in the case of the Pulp Mills paper mill, which Uruguay intended to build on the banks of the river separating it from Argentina. Where the latter filed a request with the International Court of Justice for Uruguay to take the necessary precautionary measures to avoid potential environmental damage caused by this mill. The request was rejected on the grounds of lack of scientific evidence, with the International Court of Justice once again adhering to the traditional theory of risk¹⁹.

2. World Trade Organization Dispute Settlement Body:

In a case brought before the World Trade Organization Dispute Settlement Body following the European Union's 1993 ban on imports of hormone-treated meat from the United States and Canada due to the harm it causes to human health, both the WTO and Canada protested this ban because there was no scientific evidence proving the harmful effects of this meat, rejecting the argument raised by the European Union. After all, there was no scientific evidence proving the harmful effects of this meat. And Canada protested this ban because there was no scientific evidence proving the harmful effects of such meat, rejecting the argument raised by the European Union as the defendant regarding the need to recognize the legal value of the precautionary principle derived from international law, considering it to be a The WTO considered it to be an "approach" that did not have legal status and whose content varied from case to case, based on the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS)²⁰.

Canada, on the other hand, considered the precautionary principle to be a recent development that was not yet an integral part of international law but could become one of the general principles recognized in international law in the future²¹. The Dispute Settlement Body issued an opinion stating that the precautionary principle is a recent development, but without addressing its legal value, although it expressed enthusiasm for it, ruling:

« The status of the precautionary principle in international law continues to be debated among academics, legal professionals, lawyers, and judges. Some consider that the precautionary principle has become a general principle of customary international environmental law. The question of whether it is widely accepted by Members as a principle of customary or general international law is less clear. We consider, however, that it is superfluous, and probably imprudent, for the Appellate Body to take a position in the present appeal on this important but abstract question. We note that the Panel itself did not make a definitive finding regarding the status of the precautionary principle in international law and that the precautionary principle, at least outside of international environmental law, has not yet been the subject of an authoritative formulation»²².

3. European Court of Justice ruling:

The precautionary principle was directly adopted and recognized as having legal value. In the famous mad cow disease case which marked a turning point in the transition of the precautionary principle from the field of the environment to that of public health and consumer protection the dispute arose from measures taken by the European Community to ban beef imports from the United Kingdom. However, the latter appealed against this ban, and on May 5, 1998, the court ruled to reject the appeal and thus refused to lift the ban, enshrining the precautionary principle in accordance by Article 130R/2 of the European Unity Agreement. It confirmed that in cases of doubt or uncertainty about the possibility of a risk to human health, European institutions may take protective measures without waiting for the facts and the seriousness of these risks to be fully established.

4. International Tribunal for the Law of the Sea:

It played an important role in highlighting the legal value of the precautionary principle in two cases. The first was the bluefin tuna case, in which it ordered a series of precautionary measures against Japan for conducting experimental fishing operations for this rare species of fish, at the request of New Zealand and Australia. In its ruling dated 27 August 1999, it stated: “The parties must, in such circumstances, act with caution and prudence and take effective measures to prevent serious damage to the stock of this tuna”.

In its second decision, issued on December 3, 2001, which was also based on the precautionary principle, in the case of the MOX plant licensed by Britain, Ireland filed a complaint against it for disposing of its radioactive waste in Irish waters, It based its defense on the UK not respecting its obligations under Article 206 of the 1982 United Nations Convention on the Law of the Sea because it allowed the plant to operate without proving that it had no serious environmental impact on maritime areas outside its jurisdiction. The court ruled: “Precaution and prudence require that Ireland and the United Kingdom cooperate by exchanging information on the risks and impacts that may result from the operations of the Mox plant, and that both parties take measures to address them.”

From the above, it is clear that international judicial applications of the legal value of the precautionary principle, while not ruling on the legal nature of the principle, have highlighted its important place in various international agreements, which in no way can compensate for the importance of recognizing the legal value of the principle.

In this regard, we note the extension of the application of the precautionary principle to domestic legislation, which has deemed its implementation an imperative necessity justified by scientific, technological, and even technical developments to ensure greater protection from the risks they pose, despite the lack of scientific evidence or certainty confirming their occurrence.

The French legislature, for example, after first establishing the principle in 1995 under the Barnier Law, as mentioned above, applied this principle in a famous ruling issued on September 25, 1998, in the case of the French Green Peace Association, where it decided to suspend a decision issued by the Ministry of Agriculture and Fisheries allowing the marketing of genetically modified corn varieties²³, It was then elevated to a constitutional principle under the constitutional amendment of March 1, 2005, after the Environmental Charter was incorporated into the constitutional bloc, similar to Brazil²⁴, thereby giving it greater legal force.

Furthermore, the Council of State clarified in its joint decision of November 3, 2008, that all rights enshrined in the Environmental Charter have binding legal value.

At the national level, the precautionary principle has gradually gained acceptance and has been incorporated into numerous legal texts, settling the jurisprudential debate²⁵ over whether it is a legal principle or not. It was affirmed as a legal principle in Chapter I of Title IV of the amended and supplemented Law No. 09-03²⁶ on consumer protection and the suppression of fraud, under the heading "Precautionary measures and the precautionary principle." and the Health Law under the provisions of Article 29 thereof²⁷.

We also find the precautionary principle enshrined in the second paragraph of Article 08 of Law No. 04-20²⁸ on the prevention of major risks and disaster management in the context of sustainable development, in addition to many other legal texts.

As for the national judicial application of the precautionary principle, we find that it is non-existent, as the Algerian judiciary remains hesitant to implement the principle.

Second: Effects of applying the precautionary principle

Applying the precautionary principle has several of consequences and effects, the most important of which are summarized below:

1. Reversal of the burden of proof:

This is considered the most practical means of applying the precautionary principle with flexibility²⁹ and one of its most important practical characteristics. If the general rule of proof stipulates that “the burden of proof lies with the claimant” and therefore the injured party bears the burden of proving the causal relationship between the risk and the damage suffered, the burden of proof of risks under the precautionary principle is completely different due to the specific nature of the risks it covers. The possibility of damage occurring and the lack of certainty about it constitute an obstacle to establishing evidence and proof, which has led to the need to reverse the burden of proof in the absence of scientific certainty, so that it falls on the potential cause of the damage and not on the injured party. Therefore, it is incumbent upon the initiator of the project to provide evidence that refutes the risks to the environment or public health posed by the activity, service, or product.

2. The evolution of rules for compensation for potential damage:

Since the precautionary principle has contributed to broadening the concept of compensable damage by including potential damage that is uncertain to occur in the future, traditional compensation rules may be unable to remedy and compensate for them, which has necessitated the development of compensation rules described as traditional rules to constitute one of the effects of applying the precautionary principle.

The coverage and redress of damages should not be limited to the past, but should also include future risks. Accordingly, compensation rules are distinguished by the nature of this damage, which is not traditionally known in the field of civil liability as redressing damage, but rather removing the source of damage before it occurs³⁰.

CONCLUSION

The study of the legal aspects of the precautionary principle is of great importance in defining the parameters of the precautionary principle as a distinct and unique principle characterized by anticipation and expectation, and thus oriented

towards the future. The unknown nature of the dangers arising from scientific and technological developments in various areas of life was the first step towards the birth of this principle, which is considered an effective means of addressing circumstances in which science has not yet reached a degree of certainty that allows it to determine the effects of the planned activity.

At the end of the research paper, we have listed several conclusions and recommendations, which are as follows:

- The precautionary principle is a new approach to managing uncertain risks for which scientific, technological, and even technical knowledge cannot provide definitive solutions.
- Although the precautionary principle originated in the field of the environment, given the specific nature of environmental damage that affects all of humanity and whose effects extend to all parts of the world, scientific developments that have affected various aspects of life have revealed new risks. This has necessitated the extension of the application of the precautionary principle to other areas to ensure greater protection from the damage caused by scientific and technological development.
- Despite its adoption in various international and regional agreements, not to mention various domestic legislations, and despite its popularity among jurists, it still raises many questions.
- One of the main reasons preventing the optimal implementation of the precautionary principle is the overlap between the concept of the precautionary principle and the traditional concept of prevention. The precautionary principle guarantees broader protection than the principle of prevention and even extends to protecting the prevention mechanisms themselves.

Recommendations:

- Defining the concept of the precautionary principle and specifying its content and scope has become an imperative necessity to strengthen and advance its legal status. This can only be achieved by intensifying studies and research on the principle through analyzing its elements, which will facilitate its application and thus ensure a high level of protection in various

fields.

- It has become necessary for the national judiciary to activate the application of the precautionary principle in establishing liability for breach of the duty to take the necessary precautionary measures.

References

- 1 Belaout Ibrahim, "Precaution as a Legal Instrument to Regulate Scientific Developments Potentially Harmful to the Environment." *Maaref Journal: Department of Legal Sciences*, Vol. 13, No. 24, June 2018, p. 123.
- 2 Philippe Lotorno, *Professional Civil Liability*, Translated by Suadna Al-Eid, Civil Law Series, 2007, p. 82.
- 3 Mohamed Ahmed Majid Abdel Karim, *The Precautionary Principle in Administrative Law*, PhD diss., Faculty of Law, Mansoura University, Egypt, 2021, p. 10.
- 4 The precautionary principle has been generalized to all international instruments related to environmental protection.
- 5 H el ene Trudeau, « La pr e-caution en cas d'incertitude scientifique: une des interpr etations possibles de l'article 20 in fine de la Loi sur la qualit e de l'environnement? », *les cahiers de droit*, Faculty of Law, Laval University, Vol. 43, No. 1, 2002, p.106.
- 6 Michel Prieur, « le principe de pr e-caution », p : 01, published on the website: <https://www.legiscompare.fr/web/IMG/pdf/2-Prieur.pdf>
- 7 Quoted in: Belaout Ibrahim, op.cit, p.124.
- 8 Law No. 03-10 dated July 19, 2003, concerning environmental protection within the framework of sustainable development, *Official Gazette No. 43 of 2003*, as amended and supplemented.
- 9 H el ene Trudeau, op.cit, p.113.
- 10 Na ima Amara, *The Precautionary Principle and the Liability of Professionals*, PhD diss., Faculty of Law, University of Abou Bekr Belkaid, Tlemcen, 2013–2014, p. 149–150.
- 11 Ibid, p. 152.

12 The concept of risk management refers to determining the acceptable level of risk, ensuring that the measures taken are proportionate to the chosen level of protection, applied without discrimination, and consistent with previously adopted similar measures.

Cited in: Sonia Bezzat, Mechanisms for Implementing the Precautionary Principle in International Environmental Law, PhD diss, Faculty of Law and Political Science, Mohamed Lamine Debaghine University – Setif 2, 2016–2017, p. 83

13 It states that: **"The Parties shall take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing such measures. In doing so, policies and measures to address climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases, adaptation, and encompass all economic sectors. Climate change efforts may be carried out cooperatively by interested Parties."**

14 Belaout Ibrahim, "The Normative Value of the Precautionary Principle." Paper presented at the international conference titled The Legal Establishment of the Precautionary Principle and Its Applications, held on April 12–13, 2021, Faculty of Law and Political Science, University of M'hamed Bougara, Boumerdes. Published, p. 72

15 The precautionary principle has been referenced in various treaties and agreements related to environmental protection, albeit to varying degrees. Some instruments mention it in their **preambles**, such as the **Convention on Biological Diversity** and the **1994 Oslo Protocol**. Others include it among their **general principles**, such as the **1992 Convention on the Protection of the Marine Environment**

- of the Baltic Sea Area (Helsinki Convention) and the 1992 United Nations Framework Convention on Climate Change (UNFCCC).**
- 16 Understanding and Applying the Precautionary Principle to Deep Sea Minerals Mining in the Pacific Islands Region: A Socio-cultural and Legal Approach, p 28, published on the website::
https://www.sprep.org/attachments/2012SM23/english/noum_ea-convention/11N.4.1_Annex_1_Prec_Princ_and_DSM_mining.pdf
- 17 The position of the International Court of Justice in this case cannot merely be characterized as a disregard for the precautionary principle or a passive stance toward it; rather, it constitutes a **blatant violation of the core essence** of the precautionary principle, which is fundamentally based on **the absence of full scientific certainty and the existence of potential risks**.
- 18 For more details on the circumstances of the case, see: Naïma Amara, *ibid.*, pp. 257–262.
- 19 For more details on the circumstances of the case, see: Sonia Bezzat, *ibid.*, pp. 216–219.
- 20 For more details, see: **World Trade Organization, Appellate Body Report on "European Communities – Measures Concerning Meat and Meat Products (Hormones)", WT/DS26/AB/R, WT/DS48/AB/R, 16 January 1998, p. 20**
- 21 *Ibid*, p. 51, paragraph 122.
- 22 *Ibid*, p.52, paragraph 123.
- 23 Michel Prieur, *op.cit*, p. 07.
- 24 Article 225, Paragraph 1, Subparagraphs V and VII of the Brazilian Constitution
- 25 Some jurists tend to recognize the legal value of the precautionary principle as a principle of customary international law, whereas others deny this, describing it as a political ethical principle that has yet to fully develop to

acquire legal status. They justify their position by pointing to the lack of consensus regarding the definition of the precautionary principle and the delineation of its content and characteristics.

- 26 Law No. 09-03 dated February 25, 2009, relating to consumer protection and the suppression of fraud, Official Gazette No. 15 of 2009, as amended and supplemented by Law No. 18-09 dated June 10, 2018, Official Gazette No. 35 dated June 13, 2018.
- 27 Law No. 18-11 dated July 2, 2018, concerning health, Official Gazette No. 46 dated July 29, 2018, as amended and supplemented.
- 28 Law No. 04-20 dated December 25, 2004, concerning the prevention of major hazards and disaster management within the framework of sustainable development, Official Gazette No. 84 dated December 29, 2004.
- 29 Belaout Ibrahim, *ibid.*, p. 76.
- 30 Philippe Lotorno, *ibid.*, p. 82.

Bibliography List :

1- Books:

- Philippe Lotorno, *Professional Civil Liability*, Translated by Suadna Al-Eid, Civil Law Series, 2007, p. 82.

2- Articles:

- Belhout Ibrahim, "Precaution as a Legal Means of Controlling Scientific Developments that may Harm the Environment," *Ma'arif Magazine: Legal Sciences Section*, Year 13, Issue 24, June 2018.
- Belhout Ibrahim, "The Normative Value of the Precautionary Principle," presentation given at the international conference entitled "The Legal Enshrinement of the Precautionary Principle and Its Applications" on April 12 and 13, 2021, Faculty of Law and Political Science, University of Amhamed Boukera, Boumerdès, published.
- Hélène Trudeau, "Precaution in cases of scientific uncertainty: one of the possible interpretations of Article 20 in fine of the

Environmental Quality Act?”, *Les Cahiers de droit*, Faculty of Law, Laval University, Volume 43, No. 01, 2002.

- Michel Prieur, “The Precautionary Principle,” published on the website: <https://www.legiscompare.fr/web/IMG/pdf/2-Prieur.pdf>

3- University theses:

- Ahmed Majid Abdelkrim Mohamed, *The Precautionary Principle in Administrative Law*, thesis submitted for a doctorate, Faculty of Law, Mansoura University, Egypt, 2021.
- Naima Amara, *The Precautionary Principle and Professional Responsibility*, thesis submitted for a doctorate in private law, Faculty of Law, Aboubakr Belkaid University, Tlemcen, 2013-2014.
- Sonia Bezat, *Mechanisms for Applying the Principle of Precaution in International Environmental Law*, thesis submitted for a doctorate, Faculty of Law and Political Science, University of Mohamed Lamine Debaghine, Setif 02, 2016-2017.

4- Legal texts:

- Law No. 04-20 of 25/12/2004 on the prevention of major risks and disaster management in the context of sustainable development, *Official Gazette* No. 84 of 29/12/2004.
- Law No. 09-03 of February 25, 2009, on consumer protection and the suppression of fraud, *Official Gazette* No. 15 of 2009, amended and supplemented by Law No. 18-09 of June 10, 2018, *Official Gazette* No. 35 of June 13, 2018.
- Law No. 18-11 of July 2, 2018 on health, *Official Gazette* No. 46 of July 29, 2018, amended and supplemented.

5- Reports:

- World Trade Organization, *Appellate Body Report on: “Community Measures Concerning Meat and Meat Products (Hormones),” WT/DS26/AB/R WT/DS48/AB/R* January 16, 1998.