

## THE IMPLEMENTATION CRITERIA OF PRECAUTIONARY MEASURES: THE ARCTIC OCEAN AS A CASE STUDY

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1. Introduction; 2. The implementation of the precautionary measures at different levels: Examples of different criteria; 2.2. The European Union precautionary perspective; 2.3 The United States precautionary perspective; 3. Precaution in the Arctic Ocean: A case study; 3.1. The ongoing development of an EU Arctic Policy; 3.2. The current implementation of the US Arctic Policy; 3.3. The meeting of different criteria: The Arctic Council precautionary agenda; 4. Conclusion.

### 1. INTRODUCTION

The principle of the precautionary approach was introduced in the 1992 Rio Declaration on Environment and Development (Rio Declaration) with the following terms:

*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. (Emphasis added)<sup>1</sup>

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<sup>1</sup> Rio Declaration on Environment and Development, principle 15, U.N. Doc.A/CONF.151/26 (1992) available at <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163>. It has to be noted that ten years prior the United Nations General Assembly, in the resolution, *World Charter for Nature*, impliedly inferred precaution in the enunciation of Principle 11, pars *a)*, *b)* and *c)* [A/RES/37/7, 28 October 1982]. Two years later, the term ‘precautionary measures’ was first employed internationally in the 1984 *Declaration of the First International Conference on the Protection of the North Sea*, inspired in its use by German and Swedish environmental law and policy at national levels, as it is commonly understood. For a precise collection (last updating 2001) of references concerning the precautionary principle/approach in or under legally and non-legally binding international instruments, see, A Trouwborst, *The Evolution and Status of the Precautionary Principle in International Law*, The Hague, Kluwer Law International, 2002, at 303-347.

From the above definition –which will be taken as a main reference in this paper–<sup>2</sup> the legal concept of precaution, seems to establish an independent specification of the obligation of prevention of environmental damage, although there is no *consensus* given by the scientific community concerning the risks and consequences of a certain action (or inaction). Such prevention concerns all those risks, which are definable with certainty in light of the latest scientific findings and techniques. However, there are circumstances where science is not able to give ‘certain’ answers; this is when the principle of precautionary approach is taken into consideration.

The legal relevance of the scientific uncertainty finds its *ratio essendi* in avoiding postponing *sine die* the adoption of effective anticipating measures against the threat or risk of gross, i.e. serious and/or<sup>3</sup> irreversible, human and environmental damage.

Implementation problems stem from the tension between the scientific uncertainties, the premise upon which precaution is based, and the need for certainty in a legal system generally based on the *a posteriori* causal link of activity to effect damage.

The precautionary principle shall or should be enforced after having weighed the risk of gross damage likely to happen, and the costs (including the *lucrum cessans* for potential restrictions or cessation of specific activities) of anticipatory measures, in relation to States financial capabilities. Consequently, there is the chance that a State would decide not to enforce the principle for economic reasons.

Generally speaking, there are two questions which can be seen to encapsulate the problems of identifying the implementation criteria: the question of foreseeability and the question of discretion. In the first place, the question of foreseeability concerns the difficult *identificatio* of the risk posed using the evaluation criteria in terms of the seriousness/irreversibility of any potential damage, i.e. risk assessment.

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<sup>2</sup> See among others, T O’Riordan and J Cameron (eds), *Interpreting the Precautionary Principle* (Earthscan, London 1994); D A C Freestone, E Hey, *The Precautionary Principle and International Law: The Challenge of Implementation* (Kluwer Law International, The Hague 1996); T O’Riordan, J Cameron and A Jordan (eds), *Reinterpreting the Precautionary Principle* (Cameron May, London 2001); N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (OUP, Oxford 2002) 91-223; Ch Leben and J Verhoeven (dirs), *Le Principe de Précaution: Aspects de Droit International et Communautaire* (LGDJ, Paris, 2002); A Trouwborst, *The Evolution and Status of the Precautionary Principle in International* (Kluwer Law International, The Hague 2002); P W Birnie and A E Boyle, *International Law and the Environment* (2<sup>nd</sup> ed, OUP, Oxford 2002); C R Susteijn, *The Law of Fear: Beyond the Precautionary Principle* (CUP, Cambridge 2005); *Precautionary Rights and Duties of States* (Martinus Nijhoff, Leiden 2006); J B Weiner, ‘Precaution,’ in D Bodansky, J Brunnée and E Hey (eds), *The Oxford Handbook of Environmental Law* (OUP, Oxford 2007) 597-612. (In actuality, the ongoing debate as to whether the precaution ought to be referred to as a *principle* or as an *approach* reflects the current absence of an established meaning of ‘precaution’ as a term of law. There are numerous doctrinal debates and attempts to establish a uniform definition of the concept and legal status of ‘precaution’ in International Law.) (In order to avoid unnecessary repetition of other contributions, in this study, reference will be made to the precautionary approach as a principle (Principle 15), in accordance with the Rio Declaration and with this meaning, either expressions ‘principle of precautionary approach’, ‘precautionary approach or measures’ or, where appropriate, ‘precautionary principle’ will be used interchangeably.)

<sup>3</sup> See S Di Benedetto, ‘La Funzione Interpretativa del Principio di Precauzione in Diritto Internazionale: tra accordi «ambientali» e diritto OMC’ in *Diritto del Commercio Internazionale* (Giuffrè, Milano 2006) 321. ‘Formally, the reference to the seriousness and irreversibility has been used in Principle 15 of the Rio Declaration in disjointed terms. It is more rational that Principle 15 leaves the choice, as to whether to refer to either or both of them, when the interpreter is evaluating the amount of damage.’

In the second place, the question of discretion concerns the *an* and, in confirmed cases, the *quomodo* of the reaction to the emergence of risk situations, i.e. risk management. Discretion is based on the margin of appreciation of a decision-maker who evaluates (or should evaluate) the cost of anticipatory measures in terms of proportionality. This is then compared to the price (not only monetary) which would be potentially paid in a case, where the threat of gross human environmental damage becomes reality. This reflects the dilemma of proportionality concerning an appropriate standard of implementation criteria for ensuring protection to the human environment.

The aim of this paper is essentially to address the implementation of precautionary measures at different levels. At the international, regional and national levels, by analyzing examples of varying criteria, namely those according with the European Union (EU) and United States perspectives (Section 2). In order to bring a better understanding of this aim, the paper uses a case study, where the different implementation criteria of precautionary measures meet up, such as in the Arctic Ocean (Section 3).

## 2. THE IMPLEMENTATION OF THE PRECAUTIONARY MEASURES AT DIFFERENT LEVELS: EXAMPLES OF DIFFERENT CRITERIA

According to Principle 15, the implementation criteria of the precautionary measures basically deal with the lack of full scientific certainty, the threats of serious or irreversible damage and the cost-effective measures. Namely, the following analysis pays attention to the judicial implementation at international, regional and national levels.<sup>4</sup>

*i) International Level:* The implementation of precautionary measures at international level is quite modest. The International Court of Justice (ICJ) has not yet made a substantial reference to it,<sup>5</sup> while the International Tribunal for the Law of the Sea (ITLOS) has referred to it implicitly in fisheries conservation matters to avoid serious harm.<sup>6</sup> While elsewhere the Appellate Body of the World Trade Organization (WTO) explicitly has affirmed that the ‘precautionary principle finds reflection’<sup>7</sup> in

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<sup>4</sup> See *inter alia*, O Lecucq, S Maljean-Dubois (dirs), *Le Rôle du Juge dans le Développement du Droit de l'Environnement* (Bruylant, Brussels 2008) (for a general discussion about the role of judiciary in the implementation and enforcement of international environmental law).

<sup>5</sup> *Menace ou emploi d'armes nucléaires, cit.; Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, ICJ Reports 1997*; and more recently, *Case concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, ICJ Reports 2010*.

<sup>6</sup> [*Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan), Order of 27 August 1999, Provisional Measures*, par 77 (emphasis added)]. See in general the ITLOS, M García García-Revilla, *El Tribunal Internacional del Derecho del Mar: origen, organización y competencia* (Servicio de Publicaciones de la Universidad de Córdoba-Ministerio de Asuntos Exteriores, Córdoba 2005). ‘Considering that, in the view of the Tribunal, the parties should in the circumstances act with *prudence* and *caution* to ensure that effective conservation measures are taken to prevent serious harm to the stock of southern bluefin tuna.’

<sup>7</sup> WTO, *European Communities – Measures Concerning Meat and Meat Products (ECs – Hormones) - Report of the Appellate Body* (16 January 1998) WT/DS26/AB/R and WT/DS48/AB/R [par 124].

article 5 paragraph 7 of the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement).<sup>8</sup>

It may be argued that the implementation criteria of the precautionary principle implicitly adopted by ITLOS pursuant to a teleological interpretation, can be explained either on the basis that the 1982 United Nations Convention on the Law of the Sea (UNCLOS)<sup>9</sup> indirectly requires a precautionary approach to fisheries conservation, or alternatively, on the basis that a precautionary approach is inherent in any drafting of provisional measures.<sup>10</sup>

Even so, what is relevant here is that ITLOS ordered the adoption of precautionary (cost-effective) measures for the prevention of serious (though, scientifically-speaking, uncertain) environmental damage, thereby following the implementation criteria of Principle 15 of the Rio Declaration.

On the other hand, the explicit recognition of the precautionary principle to be found in article 5, paragraph 7, of the SPS Agreement by the WTO Appellate Body, seems to derive from a different premise. The environmental matter *stricto sensu* is left aside to address the health one, removing the qualification of seriousness/irreversibility of the damage and adding the provision of anticipatory measures in accordance with a system of review. For the moment, however, there is no case law where the WTO Panel or the Appellate Body applied those “new” implementation criteria.<sup>11</sup>

As this overview shows, it can be affirmed that the precautionary principle is to be found in a much earlier phase than the mention of its international implementation, i.e. the written records of pleadings by States<sup>12</sup> or by International Organisations.<sup>13</sup> At the

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<sup>8</sup> WTO, SPS Agreement, Article 5 paragraph 7, Apr. 15, 1994, 33 I.L.M. 1125, available at [http://www.wto.org/english/docs\\_e/legal\\_e/15-sps.pdf](http://www.wto.org/english/docs_e/legal_e/15-sps.pdf). (‘In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time’(emphasis added)).

<sup>9</sup> United Nations Convention on the Law of the Sea (UNCLOS), Dec. 10, 1982, 1833, U.N.T.S. 3 (adopted in 1982 and entered into force in 1994. It was integrated by two implementation agreements, i.e. the Agreement relating to the Implementation of Part XI of the United Nation Convention of the Law of the Sea of 10 December 1982 adopted on 28 July 1994 and entered into force on 28 July 1996; and the Agreement for the Implementation of the Provision of the United Nation Convention of the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, adopted on 4 August 1995 and entered into force on 11 December 2001.

<sup>10</sup> *Southern Bluefin Tuna Cases*, *supra* note 6; See also T Lázaro Calvo, ‘Evolution Experimented in the Precautionary Principle within the Marine Environment Protection Compass as a Consequence of the United Nations Conference on Environment and Development’ in R Casado Raigón (dir), *L’Europe et la Mer. Pêche, Navigation and Marine Environment* (Bruylant, Bruxelles 2005) 487.

<sup>11</sup> See the *ECs-Hormones case infra*; See also WTO, *European Communities-Measures affecting the approval and marketing of biotech products (ECs-Biotech case) - Report of the Panel* (29 September 2006); R Casado Raigón and G Cataldi (dirs), *L’évolution et l’état actuel du Droit International de la Mer. Mélanges du Droit de la Mer offerts à Daniel Vignes* (Bruylant, Bruxells 2010).

<sup>12</sup> See for example, the Application by the Republic of New Zealand (21 August 1995) and the Intervention of Australia, Micronesia, the Marshall Island, Samoa and the Solomon Island (24 August 1995) -*Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court’s Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v France) Case*, ICJ Reports 1995; Memorial of the Republic of Hungary (2 May 1994) -*Gabčíkovo-Nagymaros Project (Hungar v*

same time, the emphasis on its implementation had been underlined by the separate or dissenting opinions of international judges, which had referred to the implicit reference to, or omission of, the principle itself in the respective sentences.<sup>14</sup>

As the last development, in the 2010 *Pulp Mills on the River Uruguay Judgment*, the ICJ preferred not to enter into a discussion on the legal status of precaution in International Law.<sup>15</sup> Instead it considered that while a ‘precautionary approach may be relevant in the interpretation and application of the Statute [of the River Uruguay, 1975], it does not follow that it operates as a reversal of the burden of proof.’<sup>16</sup>

In referring to precaution as an approach, it seems that the ICJ backs indirectly up the International Law Commission (ILC) commentaries on the 2008 Draft Articles on Shared Natural Resource.<sup>17</sup> The principle of a precautionary approach was explicitly

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*Slovakia*), ICJ Reports 1997; *Requête, Introductive d’Instance, 4 mai 2006, Case concerning Pulp Mills on the River Uruguay, cit.*; Request for Provisional Measures and Statement of Case of Ireland (9 November 2001) - *The MOX Plant Case (Ireland v United Kingdom)* (Provisional Measures, Order of 3 December 2001) ITLOS Reports 2001; Request for Provisional Measures of Malaysia (4 September 2003) - *Case concerning Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v Singapore)* (Provisional Measures, Order of 8 October 2003) ITLOS Reports 2003.

<sup>13</sup> *ECs appellant's submission*, quoted by *ECs-Hormones* (n 86-89).

<sup>14</sup> See ICJ Judge Weeramantry, ‘Introduction’ in D Shelton, A Kiss, *Judicial Handbook on Environmental Law* (UNEP Publishing Section of the United Nations Office, Nairobi 2005) xvii-xxiii (As a corollary of different dissenting and separate opinions); See also the separate opinion of ICJ Judge Cançado Trindade in the *Case concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)* (as an exhaustive doctrinal analysis on general principle of law and, particularly, precautionary principle).

<sup>15</sup> *Case concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, *cit.*, par 164.

<sup>16</sup> *Id.*

<sup>17</sup> Before drafting the Shared Natural Resource, the precautionary principle seems to have been informally discussed for years during the ILC sessions. Suffice to say as an example, that already at the beginning of the nineties, the 1994 ‘Draft Articles on the Law of the Non-navigational Uses of International Watercourses and Commentaries thereto and Resolution on Transboundary confined Groundwater’ recalled the principle of precaution in its commentaries. In fact, regarding the draft article 20, the ILC asserted that the obligation ‘to protect the ecosystems of international watercourses is thus a general application of the principle of precautionary action,’ in particular in the face of ‘dangerous substances such as those that are toxic, persistent or bioaccumulative’ or in the face of ‘very serious problems that alien or new species may cause.’ [Cf. *Yearbook of the International Law Commission*, 1994, vol. II, Part Two, at 89-135]. Also, a few years later, in the ambit *par excellence* of the ILC – ‘State Responsibility on Wrongfully Internationally Act’–, and specifically in relation to an *état de nécessité* –i.e. those exceptional cases where an essential State interest is threatened by a grave and imminent peril. The Special Rapporteur, Professor J Crawford, asserted that ‘a major question for article 33 [Necessity] is that of scientific uncertainty, and the associated question of the precautionary principle.’ The question the Special Rapporteur raised was ‘whether the language of article 33 should be amended expressly to incorporate a *precautionary element*’ and continued affirming ‘[t]he cases for and against are rather evenly balanced, but given the need to keep the defense of necessity within tight bounds, and the possibility of reflecting that element in the commentary, no change has been made.’ But in the commentary of the corresponding article of the text adopted by the ILC at its fifty-third session and submitted to the General Assembly (2001), the major question of *precautionary element* seems to have discreetly vanished without leaving behind any solution. [Cf. *Yearbook of the International Law Commission*, 2001, vol. II, Part Two, at 31-143]. Unfortunately, more indications of a practical nature have not been given, not even in the context of a more specific analysis of State Responsibility in issues of ‘Prevention of Transboundary Harm from Hazardous Activities.’ The Draft Articles approved with comments during the fifty-third session of the ILC and likewise submitted to the General Assembly in 2001. In fact, the comment about article 10 paragraph *c* only states that ‘according to the Rio Declaration, the *precautionary principle* constitutes a *very general rule of conduct of prudence*. It implies the need for States to review their obligations of prevention in a continuous manner to keep abreast of the advances in

codified in article 12 of Draft Articles on Shared Natural Resource in the following terms: ‘Aquifer States shall take a *precautionary approach* in view of uncertainty about the nature and extent of a transboundary aquifer or aquifer system and of its vulnerability to pollution.’<sup>18</sup> The ILC specifies in the commentary only that ‘[it] was well aware of the differing views on only the concept of *precautionary approach* as opposed to that of *precautionary principle*.<sup>19</sup> It decided to opt for the term “precautionary approach” because it is the less disputed formulation, based on the understanding that the *two concepts lead to similar results in practice when applied in good faith*.’<sup>20</sup>

In conclusion, the ICJ and ILC seem then to direct attention from the legal concept of precaution to its implementation. However, at the present time both of them have not provided any further indications, despite their fundamental role towards, *mutatis mutandi*, the promotion of the progressive development of International Law.

*ii) Regional Level:* On a regional level, the situation appears different, even though the European and Inter-American Courts of Human Rights (ECtHR and I/ACtHR, respectively) have not given specific attention to the precautionary principle. Nonetheless, the then Court of First Instance (CFI) and the European Court of Justice (ECJ) have brought about a praetorian development of the precautionary implementation criteria, in the context of the EU law as it will be shown below.

Regarding the ECtHR, it is sufficient to recall the recent polemic on the Large Hadron Collider (LHC) and the request for a precautionary measure by applicants against twenty countries that founded the project. The *Telegraph News* said that the ‘CERN [the European Centre for Nuclear Research] has admitted that mini black holes could be created when the particles collide [...]’. Therefore, applicants submitted the application to the ECtHR stating they do not believe the scientists at CERN ‘are taking all the *precautions* they should be in order to protect human life.’<sup>21</sup> While the lawsuit had been lodged, the petition for a precautionary measure against CERN was rejected.<sup>22</sup>

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scientific knowledge.’ But it does not explain the potential effects of these implications. Furthermore, in the 2006 Draft ‘International Liability in Case of Loss from Transboundary Harm Arising out of Hazardous Activities,’ the ILC commented in relation to article 5 paragraph *b* that the duty to relay response measures based upon the best available scientific data and technology was ‘directly connected to the application of the *precautionary approach*.’ In this case, the ILC took the opportunity to propose a restrictive interpretation of the principle, in such a way as to direct the States not to overemphasize their control, aware of the fact that ‘the application of the *precautionary approach* in any particular field [...] allows some flexibility, and is expected to be performed keeping in view all social and economic costs and benefits’ [*Yearbook of the International Law Commission*, 2006, vol. II, Part Two, at 110-182].

<sup>18</sup> *General Assembly, Official Records, Sixty-second Session, Supplement No. 10 (A/63/10)*, at 13-79.

<sup>19</sup> *Id.* at 59.

<sup>20</sup> *Id.* (emphasis added). It must be noted that the Special Rapporteur, Chusei Yamada considered ‘that the utilization of aquifers per se is not hazardous and should not necessarily involve resort to a *precautionary approach*’ [UN Doc. A/CN.4/591, 21 February 2008, par. 31, (emphasis added)]. In distinct form, the diverse comments and observations by Governments on the draft articles, for examples, those of Israel and The Netherlands that on the contrary, consider necessary the *precautionary principle* regarding the use of aquifers and it was defined as an international customary law [UN Doc. A/CN.4/595, 26 March 2008, pars 138 and 170 respectively].

<sup>21</sup> *Telegraph News Legal bid to stop CERN atom smasher from 'destroying the world,'* 9 September 2008 (emphasis added).

<sup>22</sup> *Id.*

Concerning the I/ACtHR, recent decisions that recognise a narrow relationship between the environment and the collective rights of indigenous peoples have been praised.<sup>23</sup> Although not explicitly stated yet, some cases have established a certain State responsibility when facing threats of damage to public health, which can lead to violation of the right to life.<sup>24</sup>

However, since the ECtHR and the I/ACtHR interpret human rights instruments as “living instruments”<sup>25</sup> some judgments can be expected in the near future that might apply the precautionary principle, where life-threatening risks are concerned.

*iii) National Level:* A good starting point for an analysis of the implementation of precautionary norms at a national level can be the example of the judicial implementation by the Supreme Court of India, which by the end of the eighties, had already established clear judicial interdependence between the environment and health protection.<sup>26</sup> More specifically, in one of the most well-known cases related to the application of the principle of precaution, *Vellore Citizens Welfare Forum* case,<sup>27</sup> the Supreme Court of India, while recognizing that industrial activity ‘is of vital importance to the country as a foreign exchange earner and employer,’<sup>28</sup> stated nonetheless that ‘it does not have the right to cause harm to ecology, the *environment* and *health*.’<sup>29</sup> Furthermore, it took the opportunity to reaffirm that the precautionary principle<sup>30</sup> is ‘accepted as a part of the law of India, as evidenced by the constitutional provision [...] and legislation on environmental protection. In addition, as customary international law they are incorporated into domestic law and are to be followed by Indian courts, to the extent that they do not conflict with municipal law.’<sup>31</sup> Finally, the Court concluded that the tanneries ‘have failed miserably to control the pollution they generate’<sup>32</sup> and

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<sup>23</sup> Cf. I/ACtHR, *Comunidad Sawhoyamaya c. Paraguay*, Judgment of 29 March 2006, Series C No. 146

<sup>24</sup> *Id.*

<sup>25</sup> *Tyrer v. United Kingdom*, Judgment of 25 April 1978, *European Court of Human Rights, Serie No 26*, par. 31].

<sup>26</sup> See *infra* this paragraph; see also L Rajamani, ‘Public Interest Environmental Litigation in India: Exploring Issues of Access, Participation, Equity, Effectiveness and Sustainability,’ 19 *Journal of Environmental Law*, 3 (2007), at 293-321; ‘The Right to Environmental Protection in India: Many Slip between the Cup and the Lip?,’ 16 *RECIEL*, 3 (2007), at 274-286 (for a more general discussion on the Indian jurisprudence on the environmental issues).

<sup>27</sup> *Vellore Citizens Welfare Forum v. Union of India and Others*, Supreme Court, India, 28 August 1996, 4 *IELR*, at 270-281 (arising from a public interest petition about the pollution caused by the discharge of untreated effluents from tanneries into agricultural lands and waterways). Moreover, for some subsequent cases, see, *M.C. Mehta v. Kamal Nath and Others*, Supreme Court, India, 13 December 1996, 4 *IELR*, at 283-287; *Narmada Bachao Aandolan v India and others*, Supreme Court, India, 18 October 2000, *ILDC*, at 169-181; *ND Jayal and Anor v Union of India and Others*, Supreme Court, India, 1 September 2003, *ILDC*, 456 - 467.

<sup>28</sup> *Vellore Citizens Welfare Forum* case, *cit.*, at 272.

<sup>29</sup> *Id.*

<sup>30</sup> The Supreme Court of India defines the precautionary principle in similar terms, even if in a less permissive way in respect to Principle 15 of the Declaration of Rio, explicitly adding the reversal of the burden of proof. As was stated in that Court: ‘The precautionary principle means that government authorities *must anticipate* and take preventive measures against environmental degradation; that the *lack of scientific certainty* does not justify *postponing preventive measures*, where there is a *threat of serious and irreversible damage*; and the actor, developer or industrialist has the *onus of proving* that the action is environmentally benign’ [Id. (emphasis added)].

<sup>31</sup> *Id.* at 273.

<sup>32</sup> *Id.*

asserted that ‘the authority must implement the precautionary principle [...] and assess the compensation to be paid to individuals and families in the affected areas and seek to reverse the environmental damage, directing the closure of any industry that does not pay this compensation.’<sup>33</sup>

However, it must be recalled that the relation between the environment and human health protection had already been stressed some previous years by the Supreme Court of Pakistan in the case of *Ms Shehla Zia and Others*.<sup>34</sup> Therefore, it has already been considered a *human rights case* for serious health hazards.<sup>35</sup>

The Higher Administrative Court of Turkey<sup>36</sup> and the Supreme Court of the Democratic Socialist Republic of Sri Lanka,<sup>37</sup> interpreted and applied the domestic constitutional and ordinary legal to affirm the existence of the precautionary principle to protect human life.<sup>38</sup> However, the Rio Declaration contains already an explicit reference to the principle of Environmental Impact Assessment, which is considered an important tool to realize the precautionary principle.<sup>39</sup>

Moving away from the Asian geographic area towards the Australian continent, the implementation criteria seem to be the same as in Asia, as demonstrated in Australia’s legislation of 1992, the ‘Intergovernmental Agreement on the Environment’.<sup>40</sup> In the

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<sup>33</sup> *Id.*

<sup>34</sup> *Ms Shehla Zia and Others v. Pakistan Water and Power Development Authority*, Supreme Court, Pakistan, 12 February 1994, 4 *IELR*, at 371-381. The case dealt with a group of residents (petitioners) who were opposed to the construction of an electrical power station in their residential area, due to concerns about the potential health hazards from the electromagnetic field, caused by the presence of high voltage transmission lines. The petitioners submitted a letter to the Court for consideration as a *human rights case* recalling the Supreme Court of India’s jurisprudence of the late eighties [Cf., *Id.* notes n 4 and 5 at 372].

<sup>35</sup> The Court affirmed that ‘the danger in this case affected fundamental rights’ and that ‘precautionary policy requires authorities to consider first the welfare and safety of human beings and choose a plan which avoids possible dangers or take precautionary measures to ensure safety’ [*Id.* at 373]. Moreover, the Court highlighted that ‘the 1992 Rio Declaration on Environment and Development, cited by the petitioners, has not been ratified or enacted into national law and is not binding. However, coming two decades after the 1972 Stockholm Declaration [on Human Environment], it represents an international consensus in an area which requires the cooperation of all nations, and has persuasive value’ [Ibid]. In this sense, the learned counsel for the petitioners, Dr Parvez Hasan, averred that although the Rio Declaration has been not ratified or enacted, the precautionary principle ‘has its own *sanctity* and it should be implemented, *if not in letter, at least in spirit*’ [Extract from the text of the judgment of the Court, delivered by J Akhtar, Ibid at 377]. Finally, following the suggestion of the Indian jurisprudence, the Supreme Court of Pakistan considered the right to life has a broad scope and exercised jurisdiction to make an order to enforce it, pursuant to the article 184 paragraph 3 of the Pakistan Constitution [Ibid. at 373].

<sup>36</sup> *Senih Özay v. Ministry of the Environment, Ankara and Eurogold Madencilik AS*, Higer Administrative Court, Turkey, 13 May 1997, 4 *IELR*, at 450-455.

<sup>37</sup> *Bulankulama and Six Others v. Ministry of Industrial Development and Seven Others*, Supreme Court of the Democratic Socialist Republic of Sri Lanka, 2 June 2000, 4 *IELR*, at 425-443.

<sup>38</sup> Regarding the Turkish case, please note that the Court’s decision was unanimous [*Senih Özay case, cit.*, at 452]. Regarding the Sri Lankan case note that the Court interpreted and applied the principle of precaution in relation to an *imminent infringement* of the fundamental rights of the petitioners, guaranteed by the Constitution [*Bulankulama and Six Others case, cit.*, at 429].

<sup>39</sup> Principle 17 of the 1992 Rio Declaration states: ‘Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.’ See *supra* note n. 18.

<sup>40</sup> The precautionary principle is expressed in the Australian Intergovernmental Agreement on Environment as follows: ‘Where there are *threats of serious or irreversible environmental damage, lack*

Australian courts, there are two cases discussed most often regarding the protection of the flora.<sup>41</sup> One of them against the threat posed by a road building proposal designed to relieve traffic congestion on existing transportation routes and the other concerning the construction of a tourist resort.<sup>42</sup>

A cursory glance at the African continent shows an implicit application of the principle. A case in the Supreme Court of South Africa, *Director, Mineral Development, and Sasol Mining Ltd*, applied the general implementation criteria of the precautionary principle, albeit without actually mentioning the principle itself.<sup>43</sup> In fact, in its decision not to grant a mining licence, due to the serious public health risks that were present as the result of the construction of a power station.<sup>44</sup> The Court put in practice an anticipatory protection of *environmental integrity*,<sup>45</sup> in conformity with the concept that ‘environmental rights are enshrined in the Constitution as fundamental justiciable human rights.’<sup>46</sup>

Even as far as the Antarctic continent, the practice in Argentina is a good example for showing the legislative implementation of the principle as a precautionary approach to the impact of mankind on the Antarctic continent, i.e. ‘Guía para la protección del Medio Ambiente’ by the ‘Dirección Nacional Del Antártico’.<sup>47</sup> At the same time, however, there is no shortage of other cases of judicial implementation in which the Argentine courts have applied the principle to situations where, as in the aforementioned Pakistani *human rights* case, serious public health risks were present as the result of the construction of a power station.<sup>48</sup> Still, in South America, the Brazilian

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*of full scientific certainty* should not be used as a reason for *postponing measures* to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by: (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and (ii) an assessment of the risk-weighted options of the various options’ [emphasis added].

<sup>41</sup> *Infra* note 42.

<sup>42</sup> Cf., respectively, *Leatch v National Parks and Wildlife Service and Shoalhaven City Council* [(1993) 81 LGERA 270] and *Friends of Hinchinbrook Society Inc v Minister for Environment* [(1997) 142 ALR 632]. Further information available at Parliamentary Library, Parliament of Australia: <http://www.aph.gov.au>. In doctrine, see, J Peel, ‘Interpretation and Application of the Precautionary Principle: Australia’s Contribution’, 18 *RECIEL* 1 (2009) pp. 11-25.

<sup>43</sup> Analogously, concerning the implicit application of the precautionary principle, cf., *Kajing Tubek and Others v. Ekran bhd and others*, High Court, Malaysia, 19 June 1996, 4 *IELR*, at 311- 320, at 316; *Juan Antonio Oposa and others v. Secretary of the Department of Environment and Natural Resources and Another*, Supreme Court, Philippines, 30 July 1993, at 383-395, at 386. Respectively, the Malaysian case arose in relation to the environmental impact assessment for a un hydroelectric project which involved the destruction of the plaintiffs’ longhouses, ancestral burial grounds, as well as land and forests from which the petitioners derive shelter, livelihood, food and medicine, while the second case concerns the protection of the Philippine rainforests and the consequences for the ecosystem.

<sup>44</sup> Cf., for example, *Asociacion Coordinadora de Usuarios, Consumidores y Contribuyentes v. ENRE-EDESUR*, Federal Appellate Tribunal, La Plata. The case was analyzed in D. Shelton, A. Kiss, *Judicial Handbook on Environmental Law*, *op. cit.*, at 22.

<sup>45</sup> *Director, Mineral Development, and Sasol Mining Ltd v. Save the Vaal Environment and others*, (South Africa - Supreme Court, 12 March 1999, 4 *IERL*, at 417-424, at 417].

<sup>46</sup> *Id.* at 421.

<sup>47</sup> Z D De Clément, ML Bellotti, *El Principio de Precaución Ambiental. La Práctica Argentina*, Córdoba, Lerner, 2008, at 343 ss.

<sup>48</sup> Cf., for example, *Asociacion Coordinadora de Usuarios, Consumidores y Contribuyentes v. ENRE-EDESUR*, Federal Appellate Tribunal, La Plata. The case was analyzed in D. Shelton, A. Kiss, *Judicial Handbook on Environmental Law*, *op. cit.*, at 22.

courts offer another good example of the implementation of the principle through the evolutionary interpretation of constitutional norms.<sup>49</sup>

From the analysis of this sample case law from around the world, the criteria for the implementation of precautionary norms by the domestic courts seem to be in harmony (explicitly or implicitly) with those of Principle 15 of the Rio Declaration and, in accordance with its essence of protection of the *human* environment, are not restricted solely to the application in environmental areas *stricto sensu*.

Differently, the implementation criteria of precautionary measures applied by the current twenty-seven Member States of the EU follow, to some extent, the EU praetorian jurisprudence on precaution.<sup>50</sup>

## 2.1. The EU precautionary criteria

Following the amendments of the Maastricht Treaty in 1992, the precautionary principle had received formal recognition in primary EU law. Therefore, current article 191, paragraph 2, section 1 of Treaty on the Functioning of the EU states:

‘Community policy on the environment [...] shall be based on the *precautionary principle* and on the principles that preventive actions should be taken, that the *environmental damage* should as a priority be rectified at source and that the polluter should pay.’<sup>51</sup> (Emphasis added)

It is evident that, in respect of Principle 15 of the Rio Declaration, the implementation criteria are not explicit. As will be shown below, the CFI and ECJ and, as a corollary, the 2000 *Communication on precautionary principle* [COM (2000)]<sup>52</sup> from the European Commission have defined different thresholds.

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<sup>49</sup> Cf. the study done by L. Machado, *Direito Ambiental Brasileiro*, Sao Paulo, Malheiros Editores, 11th ed., 2003, at 67.

<sup>50</sup> ‘The Relationship of International, Regional and National Environmental Law’ in F. L. Morrison, R. Wolfrum, *International, Regional and National Environmental Law* (Kluwer Law International, The Hague 2000) 132 ‘international, regional, and national [levels] are only adjectives that modified the [environmental protection] concept. They have important legal and technical consequences, but they are not barriers to a comprehensive examination of the entire issue.’ Without dwelling on it in too much detail, the EU precautionary criteria addresses decisions by member national authorities in an area covered by EU law, derived from domestic policy. But the situation becomes problematic when the EU legal act and the question does not expressly deal with the precautionary principle. Regarding the above, the EU jurisprudence seems to dictate that when it is necessary to interpret derived legislation, if possible, the meaning should conform to the precautionary principle.

<sup>51</sup> Treaty on the Functioning of the European Union (Title XX, Environment) article 191 paragraph 2, 13 December 2007, adopted in Lisbon, is identical to the 1992 EC Treaty article, apart from the obvious syntactical amendment, i.e. ‘union policy’ in place of ‘community policy.’

<sup>52</sup> European Commission (EC), ‘Communication on the Precautionary Principle’ (2 February 2000), Brussels [COM (2000)].

In accordance with the general aim of the COM (2000) to contribute by providing ‘input to the ongoing debate on this [precautionary] issue, both within the Community and internationally,’<sup>53</sup> the European Commission prefaces that:

‘... [T]he Community, like other WTO members, has the right to establish the level of protection – particularly of the *environment, human, animal and plant health* - that it deems appropriate. Applying the *precautionary principle* is a key tenet of its policy, and the choices it makes to this end *will continue to affect the views it defends internationally*, on how this principle should be applied.’<sup>54</sup> (emphasis added)

In this context, the then European Commission used the COM (2000) to provide a series of guidelines for implementing the precautionary principle as a corollary of the praetorian development of the then CFI and ECJ within the EU system.<sup>55</sup> In this way, elements of the gradual creation of a separate ‘EU precautionary regime’ can be made out, although from diverse and autonomous sources. It remains, however, interlinked to the multilevel regimes that take part in the international (environmental) dialogue.

In relation to the aforementioned implementation criteria of the Rio Declaration, the main difference is apparent when considering the question of foreseeability, where the *identificatio* of the risk does not happen through evaluation criteria in terms of seriousness/irreversibility of potential environmental damage. Therefore, it can be affirmed that for the purpose of applying the precautionary principle in EU law, it is not necessary to show the existence of a risk of serious (or/and irreversible) damage.<sup>56</sup> Rather it suffices to show the existence of an unacceptable level of risk of damage, and not only regarding environmental harm.<sup>57</sup>

Instead, regarding the question of discretion, in addition to a cost-effectiveness analysis of the anticipatory measures to be adopted in light of the principle of proportionality in similar terms to those of the Rio Declaration, the European Commission includes: the principle of non-discriminatory application,<sup>58</sup> the requirement of consistency with the measures already adopted in similar circumstances, or using similar approaches, the examination of scientific developments<sup>59</sup> and, finally, the question of risk communication –which can be inferred despite the European Commission’s silence–<sup>60</sup> ahead of the public interest in being informed of the risk of

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<sup>53</sup> COM (2000) 1.

<sup>54</sup> *Id.*

<sup>55</sup> Please note that a list of the most significant corresponding case-law can be found in the Annex II, COM (2000).

<sup>56</sup> COM (2000) 17 (emphasis added).

<sup>57</sup> *Id.* (emphasis added); See E M<sup>a</sup> Vázquez Gómez, ‘El Principio de Precaución en el Derecho Internacional de la Pesca y su Recepción en el Derecho Comunitario Europeo’ 227 (2003) *Noticias de la Unión Europea* 11; W Howarth, ‘The Interpretation of ‘Precaution’ in the European Community Common Fisheries Policy’ (2008) 20 (2) *JEL* 214 (for further discussion on the EU risk management in fisheries).

<sup>58</sup> COM (2000) 19.

<sup>59</sup> *Id.* at 21.

<sup>60</sup> *Id.* at 3, 8.

environmental deterioration following specific activities or a threat to public health due to the consumption of certain products.

As a corollary, in the EU perspective, the precautionary principle ‘has been progressively consolidated in international environmental law, and so it has since become a full-fledged and general principle of international law.’<sup>61</sup> It has been applied by the then CFI and the ECJ in the area of EU law.

Based on this view, the EU can be considered a good example to demonstrate the stimulus to the multilevel normative development of the precautionary principle, in the area of environmental protection and human health, including their difficult interaction with the principles of the free market.<sup>62</sup> The EU jurisprudence seems to implement different precautionary criteria from those of Principle 15 of the Rio Declaration, which are not totally shared at international level, and are quite different when compared to the U.S. precautionary perspective, as it is analyzed below.

## 2.2. The US precautionary perspective

The differences between the EU and US precautionary perspectives manifest themselves in light of extreme opposing positions, which oscillate between the free market and protectionism.<sup>63</sup> It seems clear that where a doubt over the safety of a product exists, the EU tends to give the benefit of the doubt to the consumer, whereas the US has given it to the producer.

A good example of this is the well-known *ECs- Hormones* case, regarding the complaint of the United States and Canada against EC’s prohibition on the placing of meat and meat products treated with certain hormones on the market and the importation of these products. In this case, the WTO Appellate Body affirmed that the precautionary principle ‘does not, by itself, and without a clear textual directive to that effect, relieve a panel from the duty of applying the normal (i.e. customary international law) principles of treaty interpretation in reading the provisions of the SPS Agreement’<sup>64</sup> and therefore it agreed with the finding of the panel that the precautionary principle (reflected in the aforementioned article 5 paragraph 7) does not override other provisions of the SPS Agreement, i.e. article 5 paragraphs 1 and 2.<sup>65</sup>

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<sup>61</sup> Id. at 11.

<sup>62</sup> See generally E Fisher, ‘Precaution, Precaution Everywhere: Developing a ‘Common Understanding’ of the Precautionary Principle in the European Community’ (2002) 9(1) MJ 7; V Heyvaert, ‘Facing the Consequences of the Precautionary Principle in European Community Law’ (2006) 31 (2) ELR 185.

<sup>63</sup> See *inter alia*, M Victor, ‘Precaution or Protectionism? The Precautionary Principle, Genetically Modified Organisms, and Allowing Unfounded Fear to Undermine Free Trade’ 14 *The Transnational Lawyer* (2001) 296-321.

<sup>64</sup> *ECs-Hormones*, *supra* note 13 [par 124].

<sup>65</sup> Ibid [par 125]. Also, it must be noted that the WTO Appellate Body previously explains that ‘whether it has been widely accepted by Members as a principle of general or customary international law appears less than clear. We consider, however, that it is unnecessary, and probably imprudent, for the Appellate Body in this appeal to take a position on this important, but abstract, question. We note that the Panel itself did not make any definitive finding with regard to the status of the precautionary principle in international law and that the precautionary principle, at least outside the field of international environmental law, still awaits authoritative formulation’ [par 123].

On first analysis and recalling the preface of the COM (2000) in accordance with which ‘the Community, like other WTO members, has the right to establish the level of protection,’ the EU appears to be more precautionary than the US. Upon more careful examination, the problem does not seem to be focused on how precautionary to be, rather it is concentrated more on what to be precautionary about, on what basis and in whose interests.

In the words of Professor C R Sunstein of the University of Chicago: ‘European nations are not “more precautionary” than the United States. [...] In the modern period, for example, the United States has appeared to take a highly precautionary approach to the risks associated with abandoned hazardous waste dumps, terrorism, and universal health care, but not to take a highly precautionary approach to the risks associated with global warming, indoor air pollution, poverty, and obesity. What I have been urging is the selectivity of precautions is not merely an empirical fact; it is a conceptual inevitability. Simply as a logical matter, no society can be highly precautionary with respect to all risks.’<sup>66</sup>

To some extent the COM (2000) seems to agree with this last observation when affirming that ‘the scope of the precautionary principle also depends on trends in case law, which to some degree are influenced by prevailing social and political values.’<sup>67</sup>

The evident political and social differences between the EU and the US are reflected not only in environmental protection and public health issues, but also in other areas of international law such as, for example, the use of force, collective security, the judicial assessment of international law and basic human rights. These differences could, however, bring, through a dialectic dynamics, a possible synthesis in a common geographical area of implementation.<sup>68</sup> For showing such dynamics, it is opportune to move now to a case study of the Arctic Ocean, where the (indirect) impact of the EU precautionary perspective on the US precautionary perspective and vice versa, can be seen pursuant to further developments in the Arctic Council precautionary agenda.

### **3. Precaution in the Arctic Ocean: A case study**

The choice of the Arctic Ocean as a case study takes place against the scientific uncertainty of the dramatic impacts of climate change and human activities on the Arctic Ocean, as well as its impact on the rest of the world: reduced sea ice and technological development are very likely to improve access to Arctic natural resources, in particular hydrocarbons, opening new opportunities and posing new challenges. The Statement, *The State of the Polar Research*, from the International Council for Science-

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<sup>66</sup> C R Sunstein, ‘Beyond the Precautionary Principle,’ 151 *U Pennsylvania L Rev* (2002-03) 1029.

<sup>67</sup> COM (2000) 1.

<sup>68</sup> *Report of the International Law Commission, Fifty-eight Session, A/61/10, 2006*, at 406. This situation shows the difficulties which arise as a result of the presence of different regimes which can create conflicting and incompatible rule-systems and institutional practices, i.e. the fragmentation of international law. However, in accordance with the ILC Study Group on Fragmentation, international law ‘was always relatively fragmented due to the diversity of national legal systems that participated in it,’ and therefore, that fragmentation is the natural background of the regimes dialogue which reflects the vitality and synergy of the international contexts towards new developments.

World Meteorological Organization Joint Committee for the International Polar Year 2007-2008, provides compelling evidence that changes are occurring in the Arctic ice-atmosphere-ocean system, although the potential for the Arctic Ocean to undergo further rapid ice discharge remains the largest unknown. However, the Statement reports a clear message: “what happens in the Polar Regions affects the rest of the world and concerns us all”.<sup>69</sup>

Rather than proposing new legal instruments for addressing the contemporary significant changes of the Arctic Ocean, both the 2008 Ilulissat Declaration and the 2010 Chelsea ministerial meeting, reaffirm the commitment of the five Arctic coastal States –Canada, Norway, Denmark (Greenland), the Russian Federation and the United States–<sup>70</sup> with the Law of the Sea.<sup>71</sup>

If there is no specific and comprehensive regime for the Arctic established by a treaty, and it currently seems that the Arctic States do not have the political will to establish one, what is happening in practice is basically the application of the existing international legal frameworks, whose main pillar is the UNCLOS (and its two Implementation Agreements) to which all Arctic States, except for the United States, are State Parties. The UNCLOS indeed provides the legal basis for the solution of problems related to: maritime delimitation, the use of natural resources, navigation through new routes, environmental protection and scientific research. Beyond areas of national jurisdiction, UNCLOS regulates the Arctic *res communis omnium*: the high seas and the (potential) International Seabed Zone. And so far, this has all been without exploring the possibility of applying Part IX of UNCLOS (Articles 122-123) in the Arctic Ocean, dedicated to ‘closed or semi-enclosed seas’, which provides a possibility of cooperation between the coastal States, either directly or through an “appropriate regional organization” open to other interested entities. Without precluding work on further specific developing for the Arctic,<sup>72</sup> the applicable legal framework also includes a number of multilateral instruments (notably, the environment and biodiversity), which apply to the Arctic Ocean, but often without specific reference to it.

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<sup>69</sup> *The State of the Polar Research*, WMO Publications, February 2009, p. 16.

<sup>70</sup> There is not yet a consensus on the exact definition of physical space of what is generally considered as “Arctic Ocean”. The author follows the Arctic Circle definition for defining the Arctic sea basin. See *UArctic Atlas*: <http://www.uarctic.org/AtlasMapLayer.aspx?m=642&amid=5955>; or the geographical coverage of the *IMO Guidelines for Ships Operating in Arctic Ice-Covered Waters [IMO Doc. MSC/Circ. 1056-MEPC/Circ. 399]*, or the FAO Arctic Fisheries Zone: Zone No. 18: <http://www.fao.org/fishery/area/Area18/en>. However, it seems generally accepted that within the Arctic Region there are territories belonging to eight States, commonly called ‘Arctic States’ according with the article 2 of the Declaration on Establishment of the Arctic Council ([www.arctic-council.org/](http://www.arctic-council.org/)). Five of them are classified as coastal States -Canada, Denmark (for Greenland), United States, Russian Federation and Norway-, while the remaining three -Finland, Iceland, Sweden-, are partly in the space delimited by the Arctic Circle (Finland and Sweden) or in the space defined by the tree-line (Iceland), but land-locked in the corresponding Arctic sea basin.

<sup>71</sup> Text of the Ilulissat Declaration is available at *Greenland Home Rule Government*: <http://uk.nanoq.gl>; and more information on the 2010 Chelsea ministerial meeting are available on [http://www.international.gc.ca/polar-polaire/arctic-meeting\\_reunion-arctique-2010\\_index.aspx](http://www.international.gc.ca/polar-polaire/arctic-meeting_reunion-arctique-2010_index.aspx).

<sup>72</sup> The IMO Maritime Safety Committee, 86th session, 27 May - 5 June 2009. It may be necessary to develop specific rules for the Arctic Ocean, as shown by the a high-priority item on the International Maritime Organization’s development of a mandatory Code for ships operating in polar waters, with a targeted completion date of 2012.

In sum, a balance between achieving the interests of States and the interests of other international entities in the Arctic Ocean, i.e. the international community and, ultimately, the mankind as a whole, should be sought by the teleological interpretation of the UNCLOS. That means a dynamic and evolving interpretation in light of the object and purpose of the UNCLOS. A good example would be the interpretation provided by separate opinions of ITLOS Judges Laing and Treves, when referring to the aforementioned implementation of precautionary measures, for avoiding the possibility of the extinction of the southern bluefin tuna species. The former affirmed that ‘[i]t cannot be denied that UNCLOS adopts a *precautionary approach*. This may be gleaned, *inter alia*, from preamble paragraph 4, identifying as an aspect of the “legal order for the seas and oceans”, “the conservation of their living resources” [...]’ while the last: ‘[I]t is not by chance that in some languages the very concept of “caution” can be found in the terms used to designate provisional measures: for instance, in Italian, *misure cautelari*, in Portuguese, *medidas cautelares*, in Spanish, *medidas cautelares* or *medidas precautorias*.’<sup>73</sup>

Likewise, it is important to bear in mind that beyond the legal partitioning of marine and submarine zones, which characterized the UNCLOS, successive developments, such as the 1995 Fish Stocks Agreement and the outcome of the 2010 Review Conference have reinforced an international conviction about the need to protect seas and oceans as unique environments (ecosystems) that biologically are not partitioned.<sup>74</sup> In this sense, it has introduced an innovation in the management of biological resources (from research activities to the effective implementation of management and administration tools)<sup>75</sup> that, applied in relation to Arctic ecosystems in light of the principle of the precautionary approach, which may dampen common concerns related to the preservation and protection of the Arctic environment, flora and fauna.<sup>76</sup>

However, the outcome of the 2010 Review Conference had so much precaution with the precautionary principle, referring again to it as a mere approach, according with the aforementioned ICJ and ILC contemporary views on that relevant point. Even same, looking at the latest development of the fisheries management mechanisms, for example, the North East Fisheries Commission (NEAFC) –which formally operates, *inter alia*, in the Arctic high seas, particularly in the Banana Hole of the Norwegian Sea and in the Loophole of the Barents Seas,<sup>77</sup> the Preamble and article 4 of the new NEAF

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<sup>73</sup> *Southern Bluefin Tuna Cases*, *cit.* See respectively par. 17 and par. 11.

<sup>74</sup> The Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks was held at United Nations Headquarters in New York, from 24 to 28 May 2010. An overview is available at: [http://www.un.org/Depts/los/convention\\_agreements/review\\_conf\\_fish\\_stocks.htm](http://www.un.org/Depts/los/convention_agreements/review_conf_fish_stocks.htm).

<sup>75</sup> Particularly, as to the developing EU approach to ecosystems, see A. Rey Aneiros, ‘Ecosystem Approach to Fisheries Management in the Common Fisheries Policy’ in Ph Morillon, *Implementation of Ecosystem Approach in Fisheries Management*, European Parliament 2008, pp.1-14; J M Sobrino Heredia, A Rey Aneiros, E López Veiga: *La integración del enfoque ecosistémico en la Política pesquera común de la Unión Europea*, Galicia 2010.

<sup>76</sup> A. Trouwborst, ‘The Precautionary Principle and the Ecosystem approach in International Law: Differences, similarities and Linkages,’ 18 *RECIEL* 1 (2009) pp. 26-37.

<sup>77</sup> Generally speaking, the Arctic high seas are characterized, on the one hand, by a large central area surrounding the geographical point of the North Pole, namely the polar cap. On the other hand, in the areas of the Arctic high seas which are not ice cap, there are zones that must necessarily be regarded as *res communis omnium*. Because of their shapes, they are commonly called *Banana Hole* and *Loophole*

Convention adopted in February 2007, show that precaution is considered as an approach and not as principle of law.<sup>78</sup>

However, the precautionary principle began to take shape at Arctic national level, except for the U.S. Even in contrast to the U.S. perspective, on the occasion of the aforementioned *ECs-Hormones* case, Canada considered that ‘the precautionary approach or concept as an *emerging* principle of international law, which may in the future crystallize into one of the “general principles of law recognized by civilized nations,” within the meaning of Article 38, paragraph 1(c), of the *Statute of the International Court of Justice*.’ Some years later, in the *Canada Ltée* case<sup>79</sup>—where the appellant challenged the validity of a municipal by-law that restricted the use of pesticides in the municipality—, the Supreme Court of Canada stated—explicitly referring to the aforementioned Indian case *Vellore Citizen*<sup>80</sup>—that ‘the regulation of pesticide use was consistent with international law, in particular the precautionary principle as defined in the 1990 Bergen Ministerial Declaration on Sustainable Development and codified in Canadian legislation. The inclusion of the precautionary principle in treaties, policy documents, and judicial decisions concerning environmental protection and preservation, may evidence its status as a principle of customary international law.’<sup>81</sup>

Finally, the Supreme Court of Canada concluded that ‘there was no conflict between federal or provincial legislation and the municipal by-law because concerns about pesticides were related to the immediate interests of the risks of health in the community within the territorial limits of the municipality’<sup>82</sup> and dismissed the Appeal.<sup>83</sup> In addition, it must be observed that the above-mentioned Indian case, as well as this last Canadian case, deal with the application of the principle of precaution in a municipal context, i.e. a sub-state level, in accordance with the idea, mentioned by the Canadian Court, that environmental problems require ‘action by *governments at all levels*’ pursuant to which ‘local governments [should be] empowered to exceed, but not to lower, national norms.’<sup>84</sup>

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and *Donut Hole*. As mentioned above, the *Banana Hole* and *Loophole* are located in the regulatory area of the NEAFC [<http://www.neafc.org/>], while the *Donut Hole* is regulated by the Convention on the Conservation and Management of the Pollock Resources in the Central Bering Sea [[http://www.afsc.noaa.gov/refm/cbs/convention\\_description.htm](http://www.afsc.noaa.gov/refm/cbs/convention_description.htm)]. Moreover, the phenomenon of melting ice is opening more offshore areas not yet regulated, as in the EEZ and beyond the jurisdiction of Alaska between the Chukchi Sea and Beaufort Sea. The main problem in relation to the aforementioned fisheries management mechanisms and the implementation criteria of precautionary measures in the international Arctic ‘holes’ lies, as in any other high seas zone, in the need for coordination among national and international provisions in the light paying attention on the *lucrum cessans* for potential restrictions or cessation of specific activities of precautionary measures in relation to States financial capability.

<sup>78</sup> *Convention on the Future Multilateral Cooperation in North East Atlantic Fisheries*, February 2007, available at [http://www.neafc.org/system/files/london-declaration\\_and\\_new\\_convention.pdf](http://www.neafc.org/system/files/london-declaration_and_new_convention.pdf) (containing the text of the new NEAFC convention).

<sup>79</sup> *114957 Canada Ltée (Spraytech, Société D’Arrosage) and Services des Espaces Verts Ltée/Chemñawn v. Town of Hudson*, Supreme Court, Canada, 28 June 2001, 4 *IELR*, at 107-119.

<sup>80</sup> *ECs-Hormones* case, *cit.*, at 23.

<sup>81</sup> *Id.* at 110.

<sup>82</sup> *Id.* at 111.

<sup>83</sup> *Id.*

<sup>84</sup> Extract from the text of the judgment of the Court, *id.* at 112.

Having stressed the above point, it may be noted that also other Arctic States have judicial practice in applying the precautionary principle in the areas of fisheries conservation as well as GMOs and chemicals management in relation to human health.<sup>85</sup> In any event, it seems that debate is still ongoing about the consolidation of an environmental protection regime, notwithstanding the precautionary principle. The regime has in any event not been incorporated into the Arctic legal regime. Instead, Ministers have chosen to wait and act only if the voluntary actions undertaken by the various working groups are not successful, which is a clearly opposite approach to the precautionary principle.<sup>86</sup>

### 3.1. The ongoing development of an EU Arctic Policy

The Nordic Council of Ministers, with its Arctic and EU expertise, has recently given a strong contribution to the elaboration of the future EU approach to the Arctic. Following the adoption of the Ilulissat Declaration on the Arctic Ocean (May 2008) by the five Arctic coastal States, (in which they affirm to be in a unique position to address the possibilities and challenges of the changing Arctic Ocean, pursuant to the Law of the Sea), the Nordic Council of Ministers hosted, in the same town of Ilulissat, the Conference, *Our Common Concern for the Arctic*, with the participation of entities from Arctic and non-Arctic States (September 2008). The Conference did not reach conclusive findings on the new conditions or specificities of the Arctic, but ended up drafting a list of common concerns.<sup>87</sup> The common concerns for the Arctic were taken into consideration by the European Parliament (EP) in its Resolution on Arctic Governance adopted in October 2008.<sup>88</sup> It finally proposes adopting an international treaty for the protection of the Arctic, inspired in part, in the Antarctic system, at least for the unpopulated and unclaimed area at the center of the Arctic Ocean. Nevertheless, the EP's perspective contrasts with the European Commission's perspective, explained in its Communication [COM (2008)], *The European Union and the Arctic Region*, advocating the full implementation of the already existing obligations –namely the

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<sup>85</sup> A comparative analysis of the status of the precautionary principle in some Nordic countries – i.e. Denmark, Finland, Iceland, Norway and Sweden - is provided by N. de Saldeer, *Implementing the Precautionary Principle, op. cit.* For some comment on the implementation of the precautionary principle in the Russian Federation, see, G. Hønneland, 'Towards a Precautionary Fisheries Management in Russia,' 48 *Ocean & Coastal Management*, 7-8 (2005), at 619-631. Moving now to the opposite end of the world, as an inevitable comparison, the practice in Argentina is a good example for showing the legislative implementation of the principle as a precautionary approach to the impact of mankind on the Antarctic continent, i.e. 'Guía para la protección del Medio Ambiente' by the 'Dirección Nacional Del Antártico' [Z D de Clément, M L Bellotti, *El Principio de Precaución Ambiental. La Práctica Argentina*, Córdoba, Lerner, 2008, at 343 ss.] At the same time, however, there is no shortage of other cases of judicial implementation in which the Argentine courts have applied the principle to situations where, as in the aforementioned Pakistani *human rights* case

<sup>86</sup> L. Nowlan, *The Arctic Legal Regime – Moving from Environmental Protection to Sustainability?*, IUCN Environmental Policy and Law Paper, no. 44, 2001. See also T. Koivurova, 'Alternatives for an Arctic Treaty. Evaluation and a new Proposal,' 17 *RECIEL*, 1 (2008), at 14-26.

<sup>87</sup> The Our Common Concern for the Arctic Conference Report, 9-10 September 2008, available at [http://www.norden.org/sv/publikationer/publikationer/2008-750/at\\_download/publicationfile](http://www.norden.org/sv/publikationer/publikationer/2008-750/at_download/publicationfile).

<sup>88</sup> The European Parliament Resolution of 9 October 2008 on Arctic Governance, available at <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P6-TA-2008-0474&language=EN>

UNCLOS and other relevant related instruments— rather than proposing new legal instruments.<sup>89</sup>

In accordance with the Commission's perspective, the Council of the European Union requested the Commission to present an Arctic policy report on progress made by the end of June 2011.<sup>90</sup> In the meantime, on 20 January 2011, the EP adopted a resolution on a sustainable EU policy for the High North<sup>91</sup>, in response to the Commission Communication on the EU and the Arctic Region. It stresses the need for a united, coordinated EU policy on the Arctic region, in which both the EU's priorities and the potential challenges and a strategy are clearly defined. Moreover, the EP underlines that a future accession of Iceland to the EU would transform the Union into an Arctic coastal entity, giving a strategic opportunity for the EU to assume a more active role, and contribute to multilateral governance in the Arctic region. The EP adds that the growing interest in the Arctic region of other non-Arctic actors indicates a different geopolitical appreciation of the Arctic on a larger scale. China illustrates this by commissioning the first icebreaker, and their allocation of funding to polar research. Other applications include South Korea, China, Italy, the EU, Japan and Singapore for status as permanent observers at the Arctic Council. Lastly, the EP underlines the major importance of the safety and security of new world trade routes through the sea in the Arctic for the EU and its Member States' economies, which control 40% of world commercial shipping. It calls on the States in the region to ensure that any current transport routes – and those that may emerge in the future – are open to international shipping. Also, to refrain from introducing any unilateral arbitrary burdens, either financial or administrative, that could hinder shipping in the Arctic, other than internationally agreed measures aimed at increasing security or protection of the environment.

In sum, the big challenge for the EU is the implementation of its 2007 Integrated Maritime Policy in the Arctic. This policy would guarantee security and stability, the sustainable use of resources as well as open and equitable access to the Arctic, and, as a corollary, the holistic environmental management pursuant to ecosystem approaches and precautionary principle. While the EP does not take into particular consideration the precautionary principle in its 2008 and 2011 Resolutions, the COM (2008) suggests that the EU should work to uphold the further development of a cooperative Arctic governance system based on the UNCLOS, which would ensure 'strict environmental management, including respect of the *precautionary principle*.' No more attention is paid by the Commission to the implementation of the precautionary principle in the Arctic Ocean. That is because the Commission, under the EP suggestions,<sup>92</sup> is convinced that awareness of the Arctic's importance in a global context needs to be raised further by delivering a standalone EU Arctic policy. Indeed, COM (2008) is the

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<sup>89</sup> COM(2008) 763 final, 20 November 2008. Text available at Maritime Affairs (EU Policy Actions): [http://ec.europa.eu/maritimeaffairs/arctic\\_overview\\_en.html](http://ec.europa.eu/maritimeaffairs/arctic_overview_en.html).

<sup>90</sup> Council Conclusions on Arctic issues 2985th Foreign Affairs, Council meeting, Brussels, 8 December 2009. Text available at Maritime Affairs (EU Policy Actions), *cit*.

<sup>91</sup> *European Parliament resolution of 20 January 2011 on a sustainable EU policy for the High North*, Text available at Maritime Affairs (EU Policy Actions).

<sup>92</sup> European Parliament Resolution of 9 October 2008 on Arctic Governance, *cit*, par 5.

basis for a more detailed reflection towards a structured and coordinated approach to Arctic matters, as the first layer of an Arctic policy for the European Union.<sup>93</sup>

What is instead significant is that, according with the EU perspective, the principle of precautionary approach, as a general principle of law, may open new cooperation perspectives with the Arctic States. Thus helping to establish –pursuant to, *inter alia*, the implementation of the precautionary principle– the right balance between the priority goal of preserving the Arctic environment and the need for sustainable use of resources.

However, it is not clear yet the extent of the legal basis for the EU Arctic Policy, particularly, whether –and to what extent– the EU should take care of the Arctic Ocean. Specifically, in terms of rights and responsibilities, while also recognizing rights and obligations for flag, port and coastal States, provided for in International Law, including UNCLOS, to which the U.S. is the only Arctic State that is not yet a part of..

### **3.2. The current implementation of the US Arctic Policy**

On 9 January 2009, president George W. Bush signed the National Security Presidential Directive on Arctic Region Policy (Directive).<sup>94</sup>

The Directive basically focuses on national security and homeland security interests in preventing terrorist attacks, increasing Arctic maritime domain and preserving the global mobility of U.S. military and civilian vessels and aircraft, throughout the Arctic region, in order to further a sovereign U.S. maritime presence in the Arctic in support of essential U.S. interests.<sup>95</sup> At the same time, the Directive refers to the participation of the U.S. in a variety of ways towards an Arctic international governance –i.e. the Arctic Council and the International Maritime Organization– and suggests that the U.S. Secretary of State shall ‘continue to seek advice and consent of the U.S. Senate to accede to the UNCLOS.’<sup>96</sup> In this sense, the U.S. accession to the UNCLOS, according to the words of the Directive, ‘will serve the national security interests of the United States, including the maritime mobility of our Armed Forces worldwide. It will secure U.S. sovereign rights over extensive marine areas, including the valuable natural resources they contain. Accession will promote U.S. interests in the environmental health of the oceans. And it will give the United States a seat at the table when the rights that are vital to our interests are debated and interpreted.’<sup>97</sup>

Further, in carrying out the Arctic Policy as it relates to environmental protection and conservation of natural resources, the Directive affirms ‘[t]he United States supports the

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<sup>93</sup> We must remember, that the Commission of the aforementioned COM (2000) affirms the precautionary principle of precautionary approach is a general principle of law. Further significant is the terminology used by the Council’s Conclusions on the Arctic stressing ‘the need to promote a *precautionary approach* to new fishing activity in Arctic high seas’ [par. 10].

<sup>94</sup> National Security Presidential Directive and Homeland Security Presidential Directive of 9 January 2009, NSPD-66 on Arctic Region Policy, *available at* <http://www.fas.org/irp/offdocs/nspd/>.

<sup>95</sup> NSPD-66 on Arctic Region Policy, par B.

<sup>96</sup> *Id.* par C (5d).

<sup>97</sup> *Id.* par C (4).

application in the Arctic region of the general principles of international fisheries management, outlined in the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of December 10, 1982, relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks and similar instruments. The U.S. endorses the protection of vulnerable marine ecosystems in the Arctic from destructive fishing practices and seeks to ensure an adequate enforcement presence to safeguard Arctic living marine resources<sup>98</sup> and '[p]ursue marine ecosystem-based management in the Arctic.'<sup>99</sup>

Significantly, there is no mention of the principle of precautionary approach. According with the U.S. precautionary perspective and its counterpoint with the EU social and political values and interests, the concept of precaution comes to be perceived in the Directive as a mere approach (also for ensuring security national issues) and not a general principle of international law which permeates the whole Arctic human and environmental protection. This is confirmed in one of the implementation instruments of the Directive, i.e. the *Final Recommendations of the Interagency Ocean Policy Task Force* (Recommendations) adopted on 19 July 2010 by the White House Council of Environmental Quality.<sup>100</sup> The Recommendations explicitly affirm that 'the United States has long taken the position that precaution is a tool or approach rather than a "principle," given the lack of a single definition or agreed formulation and the differing implications of its various forms.'<sup>101</sup>

As this overview shows, the U.S. priority seems to be given to a selective application of the international norms that ensure its sovereignty, sovereign rights and national jurisdiction in the Arctic Ocean; namely, the support for joining the UNCLOS essentially based on U.S. national security, environmental, economic, and diplomatic interests.

Generally speaking, however, the applicable Law in the Arctic Ocean should be the comprehensive existing Law of the Sea frameworks, including any norms of the UNCLOS that do not rely on the geographic location of States and that promote cooperation for protecting not only particular national interests in the Arctic, but also general interests of the international community, particularly the benefit of mankind as a whole. In this sense, a teleological interpretation of the UNCLOS could dampen common concerns for the Arctic Ocean pursuant to the implementation of precautionary criteria, even when it is not convenient for the U.S.

### **3.3. The meeting of different criteria: The Arctic Council precautionary agenda**

Throughout the current development of the international cooperation within the Arctic Council,<sup>102</sup> new techniques and tools for regulating the activities of various

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<sup>98</sup> Id. par H (4).

<sup>99</sup> Id. par H (6d).

<sup>100</sup> The text is available at: <http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans>.

<sup>101</sup> *Final Recommendations of the Interagency Ocean Policy Task Force, Summary of Public Comments on the Interim Report*, par 4 at C-III.

<sup>102</sup> Arctic Council: <http://www.arctic-council.org/>.

sectors of economic and social relevance (of the pioneering fields of science, fishery management, maritime and air navigation and hydrocarbons) have been implemented.<sup>103</sup>

Currently, the six-year Norwegian-Danish-Swedish common program chairmanships of the Arctic Council have identified the integrated management of resources as a cornerstone issue. On the occasion of the sixth Ministerial Meeting of the Arctic Council in April 2009 Ministers representing the eight Arctic States adopted the Tromsø Declaration where they '[u]rge Member States to apply the precautionary approach and polluter-pays principle as reflected in Principles 15 and 16 of the Rio Declaration, respectively, and conduct risk and environmental impact assessments for the exploration, development, transport and storage of oil, and enact and/or enforce appropriate laws and controls.'<sup>104</sup>

Increasingly, the Danish program chairmanship aimed towards cross-sectorial activities from the perspective of environmental impact assessment and precautionary measures. *Inter alia*, important steps have been already taken on offshore oil and gas activities as demonstrated by the approval of the *Arctic Offshore oil and Gas Guidelines* (Guidelines) and the Report on *Best Practices in Ecosystem-Based Oceans Management in the Arctic* (Report), both of them adopted on April 2009.<sup>105</sup> On the one hand, the Guidelines suggest that Arctic offshore oil and gas activities should be based on the general principles of environmental law, among others, the principle of the precautionary approach as reflected in Principle 15 of the Rio Declaration.<sup>106</sup> Namely, the Guidelines underline that 'where there are threats 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.'<sup>107</sup>

On the other hand, the Report considers that the principle of sustainable use of resources is central to the law, and it is to be implemented through the enactment of certain environmental principles: the precautionary principle [...].<sup>108</sup>

As is shown above, and according with the vast majority of the Arctic States precautionary perspectives, the Arctic Council expressly refers to precaution as a principle of environmental law, whose implementation follows the Principle 15 of the Rio Declaration criteria.

In the same line of work and as the last developments, on 12 May 2011, the seventh Arctic Council meeting in Nuuk (Greenland) marks the end of Denmark's chairmanship of the Arctic Council (2009-2011) and the beginning of Sweden's two-year period as Chair of the Council.<sup>109</sup>

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<sup>103</sup> T Koivurova and E J Molenaar, 'International Governance and Regulation of the Marine Arctic. Overview and Gap Analysis,' World Wildlife Fund 2009; O R Young, 'The Arctic in Play: Governance in Time of Rapid Change,' *IJMCL* (24) 2009 pp. 423-442; O S Stokke, 'Protecting the Arctic Environment: The Interplay of Global and Regional Regimes,' *YPL* (1) 2009 pp. 349-371.

<sup>104</sup> *Tromsø Declaration*, p. 6. The text is available the Arctic Council website, *cit*.

<sup>105</sup> Both text are available at the Arctic Council website, *cit*.

<sup>106</sup> *Arctic Offshore oil and Gas Guidelines*, p. 6.

<sup>107</sup> *Id.*

<sup>108</sup> *Best Practices in Ecosystem-Based Oceans Management in the Arctic*, p. 46.

<sup>109</sup> All documents are available at: <http://arctic-council.npolar.no/en/meetings/2011-nuuk-ministerial/docs/>.

Furthermore, the ongoing Arctic Ocean Review project (AOR) will produce a report on the global and regional measures, including precautionary measures, in place for the conservation and sustainable use of the Arctic Ocean demonstrating the Arctic Council's environmental stewardship.<sup>110</sup> Indeed, it seems that the current practice is emphasizing that the best way to face circumpolar challenges, is to develop circumpolar cooperation, which makes access for non-Arctic States and entities difficult. As demonstrated during the aforementioned sixth Ministerial Meeting of the Arctic Council in April 2009, by suspending the Chinese, Italian, South Korean and the EU applications for permanent observer status.

In any case, the question remains open: With or without the EU in a cooperative Arctic governance system?

#### 4. Conclusion

The review made above shows that, referring to precautionary measures in a context of *lex generalis*, the ICJ and the ILC pay more attention on their implementation according with the criteria of Principle 15 of Rio Declaration, rather than the legal status of precaution in International Law. However, it may be noticed that one of the major contributions of the EU *lex specialis* at the international level, has been to bring the WTO Appellate Body to explicitly recognize the precautionary principle in the field of international trade law, in relation to human health, beyond the implementation criteria of Principle 15 of Rio Declaration. However, for the moment, it has not been applied to any WTO case law. This lack of implementation may be explained, in some measure, due to the influence on *lex generalis* of the alternative U.S. precautionary perspective.

The case study of the Arctic Ocean seems to reflect a synthesis from the meeting of different criteria: on one hand, the developing EU Arctic Policy refers to precaution as a general principle of environmental law that would be applied in the Arctic when there is an unacceptable level of risk of human and environmental damage, beyond the implementation criteria of the Principle 15 of the Rio Declaration; on the other hand, the U.S. Arctic Policy and its implementation instruments look at the precaution as a mere tool or approach that has to be applied when there is a serious and/or unacceptable (and not just unacceptable) damage according with the implementation criteria of the Principle 15 of the Rio Declaration. As a result, the Arctic Council considers precaution as a general principle of environmental law, which has to be implemented in accordance with the criteria of Principle 15 of the Rio Declaration. However, none of Arctic Council instruments are legally binding.

As a final consideration, it can be observed that 'international law emerges from a broad common *consensus* given by a universal legal conscience of what is juridically necessary –*opinio juris communis necessitatis*– giving expression to certain values and expanding and legitimising itself from time to time.'<sup>111</sup> Already in 1997 the *Institut de*

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<sup>110</sup> Arctic Ocean Review project (2009-2013) at: <http://www.aor.is/>.

<sup>111</sup> See, J. A. Carrillo Salcedo, 'Droit International et Souveraineté des États. Cours Général de Droit International Public,' 257 *RCADI* (1996) at 35-221; A. A. Cançado Trindade, 'International Law for humankind: Towards a New *Jus Gentium*. General Course on Public International Law,' 316-317 *RCADI* (2005) at 9-439 and at 9-312.

*Droit International* recognized that ‘international environmental law is developing significant new links with the concepts of [...] the *precautionary approach*’ and stated that ‘the implications of the *precautionary principle* [...] in the context of responsibility and liability should also be considered under such regimes.’<sup>112</sup>

Precaution in the Arctic seems to take place mainly through the interplay between *lex specialis* and *lex generalis* (legally binding and/or non-legally binding). A teleological interpretation of the UNCLOS could lead to a constructive work in which its historic significance is normatively adapted to new realities and specific needs of the Arctic, pursuant to the natural development of general International Law towards an effective protection of the human environment, including unvarying implementation criteria of precautionary measures.

**Abstract:**

This study looks at whether and how the implementation criteria of the precautionary measures are applied at international, regional and national levels. Attention will be paid to two different precautionary perspectives, i.e. the European Union perspective and the United States (counter) perspective. In order to bring a better understanding, the paper uses the Arctic Ocean as a case study. Yet, it analyzes the current gaps in international law in light of the new conditions or specificities of the Arctic Ocean, while pretending to implement precautionary measures both by the European Union –which is enhancing its presence in the Arctic– and by the United States, which is an Arctic coastal State.

**Keywords:** Implementation; Principle of Precautionary Approach; Arctic Ocean; European Union, Arctic Council.

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<sup>112</sup> Cf. Resolution, *Responsibility and Liability under International Law for Environmental Damage*, 1997 Strasbourg Session, Preamble at par. 8 and Article 13 (emphasis added).