THE ROLE OF PRECAUTIONARY PRINCIPLE IN ENVIRONMENTAL PROTECTION OF COASTAL AREA

Scientific paper

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Abstract
The purpose –As the environmental law recurrently operates in the areas complicated by high level of scientific uncertainty, the precautionary principle is now emerging as a principle of law establishing whether the development process is sustainable or not. The purpose of this paper is to support the thesis that legal process attached to the application of environmental protection based on precautionary principle requires the responsible public and private power holders to prevent or terminate possible hazardous activity.
Design – The special focus is given to reviewing the roots of precautionary principle, the impact of precautionary principle in environmental matters, as well as common procedures for applying and implementing the precautionary principle.
The methodology – The methodology of the research includes quality research based on observation, the reports on previous research, examples of good practice and author's own experience.
Approach –The concept of preventive activation of the precautionary principle results in the taking of measures to prevent environmental damage without having to wait until the reality and seriousness of the threats of environmental damage become fully known.
Findings –Control of technologies, economic development and regulatory appraisal involve balancing of the cost of being too restrictive in respect of innovation with the hazards and cost of being too permissive, in the situation of scientific uncertainty and ignorance. The precautionary principle requires that the main burden of providing evidence for safety rests on the proponents of a new technology or activity.
The originality of this research- The author is urging comprehensive endorsement of precautionary principle in preserving the coastal and marine environment due to the ever-growing significance of protected areas in tourism development. In applying the precautionary principle there must be a proportionality of response or cost effectiveness of margins of error to show that the selected precautionary measure is not unduly costly.
Keywords precautionary principle, environmental protection, coastal areas, sustainable development

INTRODUCTION

The scientific data in environmental protection used for policy making will nearly always be limited by uncertainty and therefore the precautionary principle encourages policies to protect environment to face uncertain risks. Sailors sail on boats with lifeboats not because they expect wreckage, but because they know, among others, that it would be irrational not to be prepared for potential damages that they may

encounter.[1]The challenge facing is how to attain truly precautionary environmental policies.

1. THE ROOTS OF PRECAUTIONARY PRINCIPLE

1.1. German origins

In a history of precautionary principle its early use mentions Dr John Snow who in 1854 recommended removing the handle of a London water pump in order to stop a cholera epidemic. The evidence for the causal link between the spread of cholera and contact with the water pump was weak and not a proof beyond reasonable doubt. Nevertheless, mentioned simple and relatively inexpensive measure, however, was very effective in halting the spread.[2]

It has to be stressed that the origins of the precautionary principle are to be found in Germany, where the principle constituted one of the basic principles of environmental policy ever since the mid-1970s jointly with the cooperation principle and the polluter pays principle. The German equivalent of the precautionary principle, the *Vorsorgeprinzip*, is used in a specific setting, whereby a difference is made between human behaviour which causes dangers on the one hand and risks on the other hand. Insofar as dangers are at stake, the government is to prevent these by all means (*Gefahrenvorsorge*). If there is only a risk of effects occurring, the possibilities of risk prevention have to *be* investigated and if the risk is high enough, preventive measures can be ordered *(Risikovorsorge).*

1.2. The North-Sea conferences

The protection of the North Sea was discussed at a number of international conferences held in Bremen (1984), London (1987), The Hague (1990), Esbjerg (1995*),* Bergen 2002and Gothenburg 2006.[3]

At the first conference the word precaution was not used yet, while at the second conference in 1987, the London Declaration, an express reference to the necessity of a precautionary approach is made requiring an action to control inputs of the most dangerous substances even before a causal link has been established by absolutely clear scientific evidence.

At the third conference in The Hague in 1990, the parties declared that they will continue to apply the precautionary principle, that is to take action to avoid potentially damaging impacts of substances that are persistent, toxic and liable to bioaccumulate

[1] United Nations Educational, Scientific and Cultural Organization, the precautionary Principle, World Commission on the Ethics of Science Knowledge and Technology (COMEST), March 2005, UNESCO, Paris
[2] Harremoes O. and al., Late lessons from early warnings: the precautionary principle 1986-2000, European Environment Agency, Copenhagen, 2001.
[3] OSPAR Commission, Protecting and Conserving the North-East Atlantic and its resources, http://www.ospar.org/

even when there is no scientific evidence to prove that a causal link between emissions and effects.

At the forth conference in Esbjerg Declaration of 1995 the precautionary principle is also applied where fisheries management policies are concerned.

Bergen declaration adopted at the fifth conference points out that in order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postposing measures to prevent environmental degradation. [4]

The Ministers at the Gothenburg conference in 2006 revealed that many issues that have been discussed at conferences to date are now being treated at other forums.

1.3. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972, the London Convention, implies that appropriate preventive measures are taken where there is reason to believe that substances or energy introduced into the marine environment are likely to cause harm, even when there is no conclusive evidence to prove a causal relation between inputs and their effects.[5]

1.4. Rio Declaration on Environment and Development, 1992

The precautionary principle was explicitly recognized during the United Nations Conference on Environment and Development (UNCED) adopted at Rio de Janeiro on June 14, 1992 and was included in the so-called Rio Declaration.

Principle 15 states that 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.[6]

1.5. United Nations Framework Convention on Climate Changes, 1992

Under the United Nations Framework Convention on Climate Change, 1992 the Parties should take precautionary measures to anticipate, prevent or minimise the causes of climate change and mitigate its adverse effects. Where there are threats of serous or irreversible damage, lack of full scientific certainty should not be used as a reason for

[4] Bergen Declaration, Fifth International Conference on the Protection of the North Sea 20–21 March 2002 Bergen, Norway, http://www.ospar.org/html_documents/ospar/html/bergen_declaration_final.pdf
[5] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as amended (LC 1972,) http://www.unep.ch/regionalseas/main/legal/llondon.html
[6] Rio Declaration on Environment and Development, 1992, 31 ILM 874/1992

postponing such measures, taking into account that policies and measures to deal with climate changes should be cost-effective so as to ensure global benefits at the lowest possible cost.[7]

Therefore, the parties agree that there are many uncertainties in predictions of climate change, particularly with regard to the timing, magnitude and regional patterns thereof. To this end, the Convention calls upon the parties to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.

1.6. European Community Treaty, 2007

The concentration of industry and inhabited coastal areas and frequent traffic of ships, presents a constant risk of environmental catastrophes. Consequently, The European Union recognised that its well-being is inextricably linked at the sea.[8]

The precautionary principle is detailed in Article 191 R par a 2 of the Treaty on the Functioning of the European Union (EU) and is aimed at ensuring a higher level of environmental protection through preventative decision-taking in the case of risk.

The wording is that Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventative action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay. Environmental protection requirements must be integrated into the definition and implementation of other Community policies. In this context, harmonization measures answering these requirements shall include, where appropriate, a safeguard clause allowing. Member States to take provisional measures, for non-economic environmental reasons, subject to a Community inspection procedure.[9]

[7] United Nations Framework Convention on Climate Change, United Nations 1992, FCCC/INFORMAL/84, GE.05-62220 (E) 200705.
[8] Luttenberger, Axel, Rak, Loris, Maritime Governance as the Environmental Driver, 22nd International Congress Energy and the Environment, Opatija, I, 2010, pp. 503-510.
[9] Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union - Consolidated version of the Treaty on the Functioning of the European Union - Protocols - Annexes - Declarations annexed to the Final Act of the Intergovernmental Conference which adopted the Treaty of Lisbon, signed on 13 December 2007, OJ C 326, 26/10/2012 P. 0001 – 0390.

2. THE IMPACT OF THE PRECAUTIONARY PRINCIPLE IN ENVIRONMENTAL MATTERS

The precautionary principle has arisen because of the perception that the pace of efforts to combat problems such as climate change, ecosystem degradation, and resource depletion is to slow and that environmental and health problems continue to grow more rapidly than society's ability to identify and correct them.[10]

The precautionary principle is an appeal to prudence addressed to policy makers who must take decisions about products or activities that could be seriously harmful to public health and environment.[11]

In compliance with Article 38 of the Statute of the International Court of Justice, the general principles of law are also sources of international law. Principles should be considered as on e of the standards, among others. That allows evaluation of the validity of law. Also, principles have the potential to assist in the interpretation of other rules. Finally, principles have a capacity to fill the gaps.

The precautionary principle is a guiding principle that provides helpful criteria to determine the most reasonable course of action in confronting situations of potential risks. It is open-ended and flexible principle which creates a possibility and an incentive for social learning.

This principle states that evidence of harm, rather than definitive proof of harm, should prompt policy action and advocating the common sense. The principle makes it clear those decisions and developments in science and technology are primarily based on values and only to a lesser extent on scientific facts and progress. Therefore, precautionary principle embodies the notion; rather than awaiting scientific certainty that regulators should act in anticipation of environmental harm to ensure that this harm does not occur.

The precautionary principle may only be invoked with the fullest possible scientific evaluation, the determination, as far as possible, of the degree of scientific uncertainty. Moreover it should be embedded with a risk evaluation and an evaluation of the potential consequences of inaction, as well as the participation of all interested parties in the study of precautionary measures, once the results of the scientific evaluation and/or the risk evaluation are available.

[10] Kriebel, David, Tickner, Joel, Epstein, Paul, Lemons, John, Levins, Richard, Loechler, Edward, Guinn, Margaret, Rudel, Ruthann, Schettler, Ted, Stoto, Michael, the Precautionary Principle in Environmental Science; Environmental Health Perspectives, Volume 109, Number 9, September 2001, pp. 871-876.
[11] Gardnier, Stephem M., A Core of Precautionary Principle, The Journal of Political Philosophy, Volume 14, Number 1, 2006, pp. 33-60.

3. COMMON PROCEDURES FOR APPLYING THE PRECAUTIONARY PRINCIPLE

There are major barriers with respect to disclosure, access, use, coherence, cost and quality of information. Namely, end-users are not being able to find those, or are not having permission to accesses those, or there are restrictions imposed on users. It is often difficult to combine data at the cost that is beyond the budget of the user.[12]

The general principles of risk management remain applicable when the precautionary principle is invoked. Said principles are those of proportionality, non-discrimination, examination of the benefits and costs of action or lack of action and the examination of scientific development.[13]

Proportionality means tailoring measures to the chosen level of protection. Namely, risk can rarely be reduced to zero, but incomplete risk assessments may greatly reduce the range of options open to risk managers. Although a total ban may not be a proportional response to a potential risk in all cases, in certain cases, it is the sole possible response to a given risk.

The principle of non-discrimination outlines that comparable situations should not be treated differently, and that different situations should not be treated in the same way, unless there are objective grounds for doing so.

Consistency describes that measures should be of comparable scope and nature to those already taken in equivalent areas in which all scientific data are available.

Examining costs and benefits entails comparing the overall cost of action and lack of action, in both the short and long term. Its scope is broader than a simple economic cost-benefit analysis, and includes non-economic considerations, for example on the efficacy of possible options and their acceptability to the public.

Measures based on the precautionary principle should be maintained so long as scientific information is incomplete or inconclusive if the risk is still considered too high to be imposed on society, in view of chosen level of protection.

States that impose a prior approval (marketing authorisation) requirement on products that they deem dangerous a priori reverse the burden of proving injury, by treating them as dangerous unless and until businesses do the scientific work necessary to demonstrate that they are safe. Where there is no prior authorisation procedure, it may be up to the user or to public authorities to demonstrate the nature of a danger and the level of risk of a product or process. In such cases, a specific precautionary measure might be taken to place the burden of proof upon the producer, manufacturer or importer, but this cannot be made a general rule.

[12] Luttenberger, Axel, Kos, Serdjo, Regulating the Provisions of European Marine Data and Observation, International Conference IMLA 21, Fisheries and Marine Institute of Memorial University of Newfouland, St. John's, NL, Canada, 2013, pp. 69-73.
[13] Commission of the European Communities, Communication from the Commission on the precautionary principle, Brussels, 2.2.2000, COM (2000) 1 final.

4. THE IMPLEMENTATION OF THE PRECAUTIONARY PRINCIPLE

The precautionary principle, or forecaring, contributes to the change our behaviour, personally and collectively. It reminds us to acknowledge mistakes, admit our ignorance, and act with foresight and caution to prevent damage. It also removes the barriers to that kind of precautionary action.[14]

The recourse to the precautionary principle constitutes an integral part within the general framework of risk and more particularly within context of risk management which corresponds to the decision-making phase.

Namely, the precautionary principle may only be invoked in the event of a potential risk and can never justify arbitrary decisions. The precautionary principle may only be invoked when the three preliminary conditions are met: identification of potentially adverse effects; evaluation of the scientific data available; the extent of scientific uncertainty.[15]

From the moment when the precautionary principle is recognized in international law, it also becomes part of the general principles of environmental law, with undisputed legitimacy in guiding the interpretation and the application of all legal norms in force. The precautionary principle requires that the main burden of providing evidence for safety rests on the proposers of a new technology or activity.

CONCLUSIONS

The precautionary principle is as part of the package of principles of ecologically sustainable development. Control of technologies, economic development and regulatory appraisal involve balancing of the cost of being too restrictive in respect of innovation with the hazards and cost of being too permissive, in the situation of scientific uncertainty and ignorance.

The concept of preventive activation of the precautionary principle results in the taking of measures to prevent environmental damage without having to wait until the reality and seriousness of the threats of environmental damage become fully known. Prudence also suggests that some margin for error should be retained until all the consequences of the decision to proceed with the development plan, program or project are known. Potential errors are weighted in favour of environmental protection.

The first condition for application of the precautionary principles is a threat of serious or irreversible environmental damage and scientific uncertainty as to the environmental damage. The second condition is the degree of scientific uncertainty that needs to exist in order to trigger application of the precautionary principle varies depending on the

[14] Myers, Nancy, The Precautionary Principle Puts Values First, Bulletin of Science, technology and Society, Vol.22, No.3, June 2002, pp. 210-219.
[15] Camerun, James, Abouchar, Juli, The Precautionary Principle: A Fundamental Principle of Law and Policy of Protection of the Global Environment, Boston College of International and Comparative Law Review, Volume 14, Issue 1, 1991 pp. 1-26.

magnitude of environmental damage used in the formulation of the first condition precedent of the precautionary principle. The precautionary principle will not apply if there is no considerable scientific uncertainty (the second condition is not satisfied) but there is a threat of serious or irreversible environmental damage (the first condition precedent is satisfied). In a later case measures will still need to be taken but these will be preventative measures to control or regulate the relatively certain threat of serious or irreversible environmental damage, rather than precautionary measures which are appropriate in relation to uncertain threats.

In applying the precautionary principle there must be a proportionality of response or cost effectiveness of margins of error to show that the selected precautionary measure is not unduly costly. The author is advocating the comprehensive endorsement of precautionary principle in preserving the coastal and marine environment due to the ever-growing significance of protected areas in tourism and other activities development.

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